SHARP SERVICE MANUAL

No. S91T960LE635E



LCD COLOR TELEVISION

MODELS LC-60LE635E
LC-60LE636E
LC-60LE638E

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

OUTLINE

This model is based on the LC-60LE830E and partially modified.
For the contents not covered in this Service Manual, accordingly, please refer to the LC-60LE830E (S81T252LE830E) Service Manual.

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Parts Guide

Parts marked with " ⚠ " are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

OUTLINE AND DIFFERENCES FROM BASE MODEL

OUTLINE

This manual has been issued to cover the modifications of some parts in reference to the redesigned LCD panel module of Model LC-60LE830E.

In this Service Manual, the modifications from Model LC-60LE830E (No. S81T252LE830E) are focused on. For what is left out herein, please refer back to the Service Manual of the previous model LC-60LE830E (No. S81T252LE830E).

DIFFERENCES FROM BASE MODEL

Ref No.	Description	LC-60LE830E (S81T252LE830E)	LC-60LE635E (S91T960LE635E)	LC-60LE638E (S91T960LE635E)	LC-60LE636E (S91T960LE635E)	Inter-changeabil-ity	Note
PRINTED WIRING BOARD ASSEMBLIES							
N	MAIN Unit	DKEYDF733FM51	DUNTKF733FM55	DUNTKF733FM56	DUNTKF733FM57	D	Chanded
N	R/C OPC Unit	DUNTKF494FM02	←	←	←	-	No Changed
N	ICON Unit	DUNTKF770FM51	DUNTKF770FM53	DUNTKF770FM53	DUNTKF770FM53	D	Chanded
N	TOUCH SENSOR Unit	RUNTKA869WJQZ	-	-	-	-	Delete
N	3D IR TRANSMITTER Unit	RUNTKA819WJQZ	-	-	-	-	Delete
N	POWER Unit	RUNTKA799WJN1	RUNTKA847WJN1	RUNTKA847WJN1	RUNTKA847WJN1	D	Chanded
N	LCD CONTRL Unit	RUNTK4909TPYN	RUNTK4910TPZT	RUNTK4910TPZT	RUNTK4910TPZT	D	Chanded
N	KEY Unit	-	DUNTKF800FM52	DUNTKF800FM52	DUNTKF800FM52	-	Add
LCD Panel Module							
N	60" LCD Panel Module Unit	R1LK600D3GW4BH	R1LK600D3GW7CH	R1LK600D3GW7CH	R1LK600D3GW7CH	D	Chanded
MAIN Unit							
C1101	Capacitor 8200p 25V Ceramic	VCKYCZ1EB822KY	←	←	-	-	Delete (636E Only)
C1102	Capacitor 0.010 25V Ceramic	VCKYCZ1EB103KY	←	←	-	-	Delete (636E Only)
C1104	Capacitor	RC-KZA621WJQZY	←	←	-	-	Delete (636E Only)
C1106	Capacitor 33p 50V Ceramic	VCCCCZ1HH330JY	←	←	-	-	Delete (636E Only)
C1107	Capacitor 68 25V Electro-lytic	VCEASH1EN686MY	←	←	-	-	Delete (636E Only)
C1108	Capacitor 33p 50V Ceramic	VCCCCZ1HH330JY	←	←	-	-	Delete (636E Only)
C1111	Capacitor 68 25V Electro-lytic	VCEASH1EN686MY	←	←	-	-	Delete (636E Only)
C1112	Capacitor	RC-KZA237WJZZY	←	←	-	-	Delete (636E Only)
C1113	Capacitor	RC-KZA709WJQZY	←	←	-	-	Delete (636E Only)
C1114	Capacitor	RC-KZA621WJQZY	←	←	-	-	Delete (636E Only)
C1115	Capacitor	RC-KZA383WJZZY	←	←	-	-	Delete (636E Only)
C1116	Capacitor	RC-KZA709WJQZY	←	←	-	-	Delete (636E Only)

Ref No.	Description	LC-60LE830E (S81T252LE830E)	LC-60LE635E (S91T960LE635E)	LC-60LE638E (S91T960LE635E)	LC-60LE636E (S91T960LE635E)	Inter-changeabil-ity	Note
C1117	Capacitor	RC-KZA709WJQZY	←	←	-	-	Delete (636E Only)
C1118	Capacitor	-	-	-	RC-KZA237WJZZY	-	Add
C1119	Capacitor	RC-KZA383WJZZY	←	←	-	-	Delete (636E Only)
C1120	Capacitor 0.010 25V Ceramic	VCKYCZ1EB103KY	←	←	-	-	Delete (636E Only)
C1123	Capacitor 0.047 10V Ceramic	VCKYCZ1AB473KY	←	←	-	-	Delete (636E Only)
C1125	Capacitor 0.047 10V Ceramic	VCKYCZ1AB473KY	←	←	-	-	Delete (636E Only)
C1130	Capacitor	RC-KZA237WJZZY	←	←	-	-	Delete (636E Only)
C1174	Capacitor 33p 50V Ceramic	-	-	-	VCCCCZ1HH330JY	-	Add
C1175	Capacitor 33p 50V Ceramic	-	-	-	VCCCCZ1HH330JY	-	Add
C1178	Capacitor 0.010 25V Ceramic	VCKYCZ1EB103KY	←	←	-	-	Delete (636E Only)
C1179	Capacitor 0.010 25V Ceramic	-	-	-	VCKYCZ1EB103KY	-	Add
C1180	Capacitor 0.010 25V Ceramic	-	-	-	VCKYCZ1EB103KY	-	Add
C1181	Capacitor 0.010 25V Ceramic	VCKYCZ1EB103KY	←	←	-	-	Delete (636E Only)
C1182	Capacitor 0.010 25V Ceramic	VCKYCZ1EB103KY	←	←	-	-	Delete (636E Only)
C1183	Capacitor 0.010 25V Ceramic	VCKYCZ1EB103KY	←	←	-	-	Delete (636E Only)
C1184	Capacitor 0.010 25V Ceramic	VCKYCZ1EB103KY	←	←	-	-	Delete (636E Only)
C1188	Capacitor 1000p 50V Ceramic	VCKYCZ1HB102KY	←	←	-	-	Delete (636E Only)
C1189	Capacitor 0.10 25V Ceramic	VCKYCY1EB104KY	←	←	-	-	Delete (636E Only)
C1190	Capacitor 0.010 25V Ceramic	VCKYCZ1EB103KY	←	←	-	-	Delete (636E Only)
C1191	Capacitor	-	-	-	RC-KZA531WJQZY	-	Add
C1192	Capacitor	-	-	-	RC-KZA531WJQZY	-	Add
C1193	Capacitor 0.010 25V Ceramic	-	-	-	VCKYCZ1EB103KY	-	Add
C2002	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add
C2005	Capacitor 100p 50V Ceramic	-	VCCCCZ1HH101JY	VCCCCZ1HH101JY	VCCCCZ1HH101JY	-	Add
C2603	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add

Ref No.	Description	LC-60LE830E (S81T252LE830E)	LC-60LE635E (S91T960LE635E)	LC-60LE638E (S91T960LE635E)	LC-60LE636E (S91T960LE635E)	Inter-changeabil-ity	Note
C2604	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add
C2605	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add
C2606	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add
C2607	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add
C2608	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add
C2609	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add
C2610	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add
C2701	Capacitor 10p 50V Ceramic	VCCCCZ1HH100DY	-	-	-	-	Delete
C2703	Capacitor 0.10 10V Ceramic	VCKYCZ1AB104KY	-	-	-	-	Delete
C2704	Capacitor 0.10 10V Ceramic	VCKYCZ1AB104KY	-	-	-	-	Delete
C2705	Capacitor 0.10 10V Ceramic	VCKYCZ1AB104KY	-	-	-	-	Delete
C2706	Capacitor 0.10 10V Ceramic	VCKYCZ1AB104KY	-	-	-	-	Delete
C2707	Capacitor 0.10 10V Ceramic	VCKYCZ1AB104KY	-	-	-	-	Delete
C2708	Capacitor	RC-KZA383WJZZY	-	-	-	-	Delete
C2709	Capacitor 0.10 10V Ceramic	VCKYCZ1AB104KY	-	-	-	-	Delete
C2710	Capacitor 0.10 10V Ceramic	VCKYCZ1AB104KY	-	-	-	-	Delete
C2711	Capacitor	RC-KZA531WJQZY	-	-	-	-	Delete
C2713	Capacitor	RC-KZA383WJZZY	-	-	-	-	Delete
C2717	Capacitor	RC-KZA383WJZZY	-	-	-	-	Delete
C2718	Capacitor	RC-KZA621WJQZY	-	-	-	-	Delete
C2719	Capacitor	RC-KZA621WJQZY	-	-	-	-	Delete
C2726	Capacitor	RC-KZA621WJQZY	-	-	-	-	Delete
C2728	Capacitor	RC-KZA621WJQZY	-	-	-	-	Delete
C2732	Capacitor 1000p 50V Ceramic	VCKYCZ1HB102KY	-	-	-	-	Delete
C2736	Capacitor	RC-KZA709WJQZY	-	-	-	-	Delete
C2737	Capacitor	RC-KZA709WJQZY	-	-	-	-	Delete
C2740	Capacitor 0.33 25V Ceramic	VCKYTV1EB334KY	-	-	-	-	Delete
C2753	Capacitor 0.10 10V Ceramic	VCKYCZ1AB104KY	-	-	-	-	Delete
C2782	Capacitor 12p 50V Ceramic	VCCCCZ1HH120JY	-	-	-	-	Delete
C3519	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add
C3520	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add
C3521	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add

Ref No.	Description	LC-60LE830E (S81T252LE830E)	LC-60LE635E (S91T960LE635E)	LC-60LE638E (S91T960LE635E)	LC-60LE636E (S91T960LE635E)	Inter-changeabil-ity	Note
C3522	Capacitor	-	RC-KZA237WJZZY	RC-KZA237WJZZY	RC-KZA237WJZZY	-	Add
C3523	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add
C3524	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add
C3525	Capacitor	-	RC-KZA237WJZZY	RC-KZA237WJZZY	RC-KZA237WJZZY	-	Add
C3526	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add
C3527	Capacitor 0.10 10V Ceramic	-	VCKYCZ1AB104KY	VCKYCZ1AB104KY	VCKYCZ1AB104KY	-	Add
C4461	Capacitor 0.010 25V Ceramic	VCKYCZ1EB103KY	←	←	-	-	Delete (636E Only)
C4462	Capacitor 0.010 25V Ceramic	VCKYCZ1EB103KY	←	←	-	-	Delete (636E Only)
D1101	Diode RB156L-40TE25	VHDRB156L40-1Y	←	←	-	-	Delete (636E Only)
D1102	Diode 1SR154-400TE25	VHD1SR154++-1Y	←	←	-	-	Delete (636E Only)
D1103	Diode RB156L-40TE25	VHDRB156L40-1Y	←	←	-	-	Delete (636E Only)
D1104	Diode RB156L-40TE25	VHDRB156L40-1Y	←	←	-	-	Delete (636E Only)
D1105	Diode RB156L-40TE25	VHDRB156L40-1Y	←	←	-	-	Delete (636E Only)
FB1101	Ferrite Core	RBLN-A192WJZZY	←	←	-	-	Delete (636E Only)
FB1104	Ferrite Core	RBLN-A192WJZZY	←	←	-	-	Delete (636E Only)
FB2004	Ferrite Core	RBLN-A074WJZZY	-	-	-	-	Delete
FB2008	Ferrite Core	RBLN-A192WJZZY	-	-	-	-	Delete
FB2011	Ferrite Core	RBLN-A192WJZZY	-	-	-	-	Delete
FB2012	Ferrite Core	RBLN-A042WJZZY	-	-	-	-	Delete
FB2013	Ferrite Core	RBLN-A042WJZZY	-	-	-	-	Delete
FB2014	Ferrite Core	RBLN-A192WJZZY	-	-	-	-	Delete
FB2018	Ferrite Core	RBLN-A192WJZZY	-	-	-	-	Delete
FB2023	Ferrite Core	-	RBLN-A192WJZZY	RBLN-A192WJZZY	RBLN-A192WJZZY	-	Add
FB2024	Ferrite Core	-	RBLN-A192WJZZY	RBLN-A192WJZZY	RBLN-A192WJZZY	-	Add
FB2601	Ferrite Core	-	RBLN-A042WJZZY	RBLN-A042WJZZY	RBLN-A042WJZZY	-	Add
FB2602	Ferrite Core	-	RBLN-A042WJZZY	RBLN-A042WJZZY	RBLN-A042WJZZY	-	Add
FB2603	Ferrite Core	-	RBLN-A042WJZZY	RBLN-A042WJZZY	RBLN-A042WJZZY	-	Add
FB2604	Ferrite Core	-	RBLN-A074WJZZY	RBLN-A074WJZZY	RBLN-A074WJZZY	-	Add

Ref No.	Description	LC-60LE830E (S81T252LE830E)	LC-60LE635E (S91T960LE635E)	LC-60LE638E (S91T960LE635E)	LC-60LE636E (S91T960LE635E)	Inter-changeabil-ity	Note
FB2 605	Ferrite Core	-	RBLN-A042WJZZY	RBLN-A042WJZZY	RBLN-A042WJZZY	-	Add
FB2 606	Ferrite Core	-	RBLN-A074WJZZY	RBLN-A074WJZZY	RBLN-A074WJZZY	-	Add
FB2 607	Ferrite Core	-	RBLN-A074WJZZY	RBLN-A074WJZZY	RBLN-A074WJZZY	-	Add
FB2 608	Ferrite Core	-	RBLN-A042WJZZY	RBLN-A042WJZZY	RBLN-A042WJZZY	-	Add
FB2 609	Ferrite Core	-	RBLN-A042WJZZY	RBLN-A042WJZZY	RBLN-A042WJZZY	-	Add
FB2 610	Ferrite Core	-	RBLN-A074WJZZY	RBLN-A074WJZZY	RBLN-A074WJZZY	-	Add
FB2 611	Ferrite Core	-	RBLN-A074WJZZY	RBLN-A074WJZZY	RBLN-A074WJZZY	-	Add
FB2 612	Ferrite Core	-	RBLN-A074WJZZY	RBLN-A074WJZZY	RBLN-A074WJZZY	-	Add
FB2 613	Ferrite Core	-	RBLN-A074WJZZY	RBLN-A074WJZZY	RBLN-A074WJZZY	-	Add
FB2 614	Ferrite Core	-	RBLN-A042WJZZY	RBLN-A042WJZZY	RBLN-A042WJZZY	-	Add
FB2 615	Ferrite Core	-	RBLN-A192WJZZY	RBLN-A192WJZZY	RBLN-A192WJZZY	-	Add
FB2 616	Ferrite Core	-	RBLN-A192WJZZY	RBLN-A192WJZZY	RBLN-A192WJZZY	-	Add
FB2 617	Ferrite Core	RBLN-A042WJZZY	-	-	-	-	Delete
FB2 621	Ferrite Core	RBLN-A042WJZZY	-	-	-	-	Delete
FB2 622	Ferrite Core	RBLN-A042WJZZY	-	-	-	-	Delete
FB2 623	Ferrite Core	RBLN-A074WJZZY	-	-	-	-	Delete
FB2 624	Ferrite Core	RBLN-A042WJZZY	-	-	-	-	Delete
FB2 625	Ferrite Core	RBLN-A074WJZZY	-	-	-	-	Delete
FB2 626	Ferrite Core	RBLN-A074WJZZY	-	-	-	-	Delete
FB2 627	Ferrite Core	RBLN-A042WJZZY	-	-	-	-	Delete
FB2 628	Ferrite Core	RBLN-A042WJZZY	-	-	-	-	Delete
FB2 629	Ferrite Core	RBLN-A074WJZZY	-	-	-	-	Delete
FB2 631	Ferrite Core	RBLN-A074WJZZY	-	-	-	-	Delete
FB2 632	Ferrite Core	RBLN-A192WJZZY	-	-	-	-	Delete
FB2 633	Ferrite Core	RBLN-A192WJZZY	-	-	-	-	Delete
FB2 634	Ferrite Core	RBLN-A192WJZZY	-	-	-	-	Delete
FB2 635	Ferrite Core	RBLN-A192WJZZY	-	-	-	-	Delete
FB2 636	Ferrite Core	RBLN-A192WJZZY	-	-	-	-	Delete
FB2 638	Ferrite Core	RBLN-A074WJZZY	-	-	-	-	Delete
FB2 709	Ferrite Core	RBLN-A206WJZZY	-	-	-	-	Delete
FB2 712	Ferrite Core	RBLN-A206WJZZY	-	-	-	-	Delete
FB3 305	Ferrite Core	-	RBLN-A022WJZZY	RBLN-A022WJZZY	RBLN-A022WJZZY	-	Add

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FL3507	Filter	-	RFILNA119WJZZY	RFILNA119WJZZY	RFILNA119WJZZY	-	Add
FL3508	Filter	-	RFILNA119WJZZY	RFILNA119WJZZY	RFILNA119WJZZY	-	Add
FL3509	Filter	-	RFILNA119WJZZY	RFILNA119WJZZY	RFILNA119WJZZY	-	Add
IC1105	IC LNBH23PPR/1B	RH-IXC563WJQZY	←	←	-	-	Delete (636E Only)
IC1108	IC MM3416C25NRE	-	-	-	VHI3416C25N-1Y	-	Add
IC2001	IC	RH-iXD241WJN2Q	RH-iXD241WJNJQ	RH-iXD241WJNJQ	RH-iXD241WJNJQ	D	Changed
IC2701	IC YSS951-VZE2	VHIYSS951VZ-1Y	-	-	-	-	Delete
IC2702	IC YDA164B-QZE2	VHIYDA164BZ-1Y	-	-	-	-	Delete
IC3503	IC K4B1G1646G-BCH9	-	RH-IXD266WJQZQ	RH-IXD266WJQZQ	RH-IXD266WJQZQ	-	Add
L1101	Coil	RCILPB016WJQZY	←	←	-	-	Delete (636E Only)
L1102	Coil	RCILPB227WJQZY	←	←	-	-	Delete (636E Only)
L1103	Coil	VPCEM100MR70NY	←	←	-	-	Delete (636E Only)
L1104	Coil	VPCEM100MR70NY	←	←	-	-	Delete (636E Only)
L1107	Coil Peaking 10μH	VPCEM100MR70NY	←	←	-	-	Delete (636E Only)
L1501	Coil	RCILFA228WJZZY	←	←	-	-	Delete (636E Only)
L1502	Coil	RCILFA228WJZZY	←	←	-	-	Delete (636E Only)
L1503	Coil	RCILFA228WJZZY	←	←	-	-	Delete (636E Only)
L1504	Coil	RCILFA228WJZZY	←	←	-	-	Delete (636E Only)
L1105	Coil	-	-	-	VPCEM100MR70NY	-	Add
L1107	Coil Peaking 10μH	-	-	-	VPCEM100MR70NY	-	Add
L1501	Coil	-	-	-	RCILFA228WJZZY	-	Add
L1502	Coil	-	-	-	RCILFA228WJZZY	-	Add
L1503	Coil	-	-	-	RCILFA228WJZZY	-	Add
L1504	Coil	-	-	-	RCILFA228WJZZY	-	Add
L2601	Coil	RCILFA157WJZZY	-	-	-	-	Delete
L2602	Coil	RCILFA157WJZZY	-	-	-	-	Delete
L2603	Coil	RCILFA157WJZZY	-	-	-	-	Delete

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L2604	Coil	RCILFA157WJZZY	-	-	-	-	Delete
L2605	Coil	RCILFA157WJZZY	-	-	-	-	Delete
L2606	Coil	RCILFA157WJZZY	-	-	-	-	Delete
L2607	Coil	-	RCILFA228WJZZY	RCILFA228WJZZY	RCILFA228WJZZY	-	Add
L2608	Coil	-	RCILFA228WJZZY	RCILFA228WJZZY	RCILFA228WJZZY	-	Add
L2609	Coil	-	RCILFA228WJZZY	RCILFA228WJZZY	RCILFA228WJZZY	-	Add
L2610	Coil	-	RCILFA228WJZZY	RCILFA228WJZZY	RCILFA228WJZZY	-	Add
L2705	Coil	RCILPB209WJQZY	-	-	-	-	Delete
L2706	Coil	RCILPB209WJQZY	-	-	-	-	Delete
P2601	Plug	QCNCWA671WJQZY	-	-	-	-	Delete
P2604	Plug	-	QCNCWA671WJQZY	QCNCWA671WJQZY	QCNCWA671WJQZY	-	Add
P2702	Plug	QPLGNA903WJZZY	-	-	-	-	Delete
Q1108	Transister 2SC3928A-T112-1R	VS2SC3928AR-1Y	←	←	-	-	Delete (636E Only)
Q2001	Transister RT1N141U-T111-1	VSRT1N141U/-1Y	-	-	-	-	Delete
Q2008	Transister RN4985(TE85L,F)	VSRN4985///-1Y	-	-	-	-	Delete
Q2011	Transister RT1P141U-T112-1	VSRT1P141C/-1Y	-	-	-	-	Delete
R1102	Resistor 100 1/16W Metal Oxide	-	-	-	VRS-CZ1JF101JY	-	Add
R1103	Resistor 100 1/16W Metal Oxide	-	-	-	VRS-CZ1JF101JY	-	Add
R1105	Resistor 2.2k 1/16W Metal Oxide	VRS-CZ1JF222JY	←	←	-	-	Delete (636E Only)
R1108	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	←	←	-	-	Delete (636E Only)
R1110	Resistor 2.2k 1/16W Metal Oxide	VRS-CZ1JF222JY	←	←	-	-	Delete (636E Only)
R1111	Resistor 10k 1/16W Metal Oxide	VRS-CZ1JF103JY	←	←	-	-	Delete (636E Only)
R1120	Resistor 10k 1/16W Metal Oxide	VRS-CZ1JF103JY	←	←	-	-	Delete (636E Only)
R1122	Resistor 10k 1/16W Metal Oxide	VRS-CZ1JF103JY	←	←	-	-	Delete (636E Only)
R1126	Resistor 15k 1/16W Metal Oxide	VRS-CZ1JF153JY	←	←	-	-	Delete (636E Only)
R1127	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	←	←	-	-	Delete (636E Only)
R1128	Resistor 100 1/16W Metal Oxide	VRS-CZ1JF101JY	←	←	-	-	Delete (636E Only)

Ref No.	Description	LC-60LE830E (S81T252LE830E)	LC-60LE635E (S91T960LE635E)	LC-60LE638E (S91T960LE635E)	LC-60LE636E (S91T960LE635E)	Inter-changeabil-ity	Note
R1129	Resistor 100 1/16W Metal Oxide	VRS-CZ1JF101JY	←	←	-	-	Delete (636E Only)
R1131	Resistor 100 1/16W Metal Oxide	VRS-CZ1JF101JY	←	←	-	-	Delete (636E Only)
R1132	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	←	←	-	-	Delete (636E Only)
R1133	Resistor 3.3 1/4W Metal Oxide	VRS-TQ2EF3R3JY	←	←	-	-	Delete (636E Only)
R1134	Resistor 15 1/16W Metal Oxide	VRS-CZ1JF150JY	←	←	-	-	Delete (636E Only)
R1136	Resistor 22 1/32W Metal Composition	VRK-SB1FF220JY	←	←	-	-	Delete (636E Only)
R1137	Resistor 22 1/32W Metal Composition	VRK-SB1FF220JY	←	←	-	-	Delete (636E Only)
R1138	Resistor 22 1/32W Metal Composition	VRK-SB1FF220JY	←	←	-	-	Delete (636E Only)
R1139	Resistor 22 1/32W Metal Composition	-	-	-	VRK-SB1FF220JY	-	Add
R1140	Resistor 22 1/32W Metal Composition	-	-	-	VRK-SB1FF220JY	-	Add
R1142	Resistor 10 1/16W Metal Composition	VRK-SA1JF100JY	←	←	-	-	Delete (636E Only)
R1143	Resistor 100 1/16W Metal Oxide	VRS-CZ1JF101JY	←	←	-	-	Delete (636E Only)
R1144	Resistor 100 1/16W Metal Oxide	VRS-CZ1JF101JY	←	←	-	-	Delete (636E Only)
R1145	Resistor 22 1/32W Metal Composition	-	-	-	VRK-SB1FF220JY	-	Add
R1151	Resistor 10k 1/16W Metal Oxide	VRS-CZ1JF103JY	←	←	-	-	Delete (636E Only)
R1154	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	←	←	-	-	Delete (636E Only)
R1155	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	←	←	-	-	Delete (636E Only)
R1157	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	←	←	-	-	Delete (636E Only)
R1159	Resistor 10k 1/16W Metal Oxide	VRS-CZ1JF103JY	←	←	-	-	Delete (636E Only)
R1162	Resistor 0 1/16W Metal Oxide	VRS-CY1JF000JY	←	←	-	-	Delete (636E Only)
R1164	Resistor 0 1/16W Metal Oxide	-	-	-	VRS-CY1JF000JY	-	Add
R1180	Resistor 150k 1/16W Metal Oxide	VRS-CZ1JF154JY	←	←	-	-	Delete (636E Only)
R1181	Resistor 2.2k 1/16W Metal Oxide	VRS-CZ1JF222JY	←	←	-	-	Delete (636E Only)

Ref No.	Description	LC-60LE830E (S81T252LE830E)	LC-60LE635E (S91T960LE635E)	LC-60LE638E (S91T960LE635E)	LC-60LE636E (S91T960LE635E)	Inter-changeabil-ity	Note
R1182	Resistor 2.2k 1/16W Metal Oxide	VRS-CZ1JF222JY	←	←	-	-	Delete (636E Only)
R1183	Resistor 22k 1/16W Metal Oxide	VRS-CZ1JF223JY	←	←	-	-	Delete (636E Only)
R1184	Resistor 10k 1/16W Metal Oxide	VRS-CZ1JF103JY	←	←	-	-	Delete (636E Only)
R1185	Resistor 0 1/32W Metal Composition	VRK-SB1FF000JY	←	←	-	-	Delete (636E Only)
R1186	Resistor 0 1/32W Metal Composition	VRK-SB1FF000JY	←	←	-	-	Delete (636E Only)
R1187	Resistor 0 1/32W Metal Composition	VRK-SB1FF000JY	←	←	-	-	Delete (636E Only)
R1188	Resistor 0 1/32W Metal Composition	-	-	-	VRK-SB1FF000JY	-	Add
R1189	Resistor 0 1/32W Metal Composition	-	-	-	VRK-SB1FF000JY	-	Add
R1190	Resistor 0 1/32W Metal Composition	-	-	-	VRK-SB1FF000JY	-	Add
R1191	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	←	←	-	-	Delete (636E Only)
R1195	Resistor 100k 1/16W Metal Oxide	VRS-CZ1JF104JY	←	←	-	-	Delete (636E Only)
R1201	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	←	←	-	-	Delete (636E Only)
R1202	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	←	←	-	-	Delete (636E Only)
R1203	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	←	←	-	-	Delete (636E Only)
R1204	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	←	←	-	-	Delete (636E Only)
R1205	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	←	←	-	-	Delete (636E Only)
R1206	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	←	←	-	-	Delete (636E Only)
R1207	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	←	←	-	-	Delete (636E Only)
R2001	Resistor 0 1/16W Metal Oxide	VRS-CY1JF000JY	-	-	-	-	Delete
R2006	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2007	Resistor 2.2k 1/16W Metal Composition	VRK-SA1JF222JY	-	-	-	-	Delete
R2027	Resistor 2.7k 1/16W Metal Oxide	-	VRS-CZ1JF272JY	VRS-CZ1JF272JY	VRS-CZ1JF272JY	-	Add
R2033	Resistor 100 1/16W Metal Oxide	VRS-CZ1JF101JY	-	-	-	-	Delete
R2050	Resistor 220 1/16W Metal Composition	VRK-SA1JF221JY	-	-	-	-	Delete
R2056	Resistor 1.0k 1/16W Metal Oxide	VRS-CZ1JF102JY	-	-	-	-	Delete

Ref No.	Description	LC-60LE830E (S81T252LE830E)	LC-60LE635E (S91T960LE635E)	LC-60LE638E (S91T960LE635E)	LC-60LE636E (S91T960LE635E)	Inter-changeabil-ity	Note
R2072	Resistor 2.7k 1/16W Metal Oxide	VRS-CZ1JF272JY	-	-	-	-	Delete
R2701	Resistor 10 1/16W Metal Composition	VRK-SA1JF100JY	-	-	-	-	Delete
R2702	Resistor 1.0k 1/16W Metal Oxide	VRS-CZ1JF102JY	-	-	-	-	Delete
R2703	Resistor 1.0M 1/16W Metal Oxide	VRS-CZ1JF105JY	-	-	-	-	Delete
R2706	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2707	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2708	Resistor 4.7k 1/16W Metal Oxide	VRS-CZ1JF472JY	-	-	-	-	Delete
R2709	Resistor 4.7k 1/16W Metal Oxide	VRS-CZ1JF472JY	-	-	-	-	Delete
R2710	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2711	Resistor 0 1/16W Metal Oxide	-	VRS-CZ1JF000JY	VRS-CZ1JF000JY	VRS-CZ1JF000JY	-	Add
R2712	Resistor 0 1/16W Metal Oxide	-	VRS-CZ1JF000JY	VRS-CZ1JF000JY	VRS-CZ1JF000JY	-	Add
R2713	Resistor 0 1/16W Metal Oxide	-	VRS-CZ1JF000JY	VRS-CZ1JF000JY	VRS-CZ1JF000JY	-	Add
R2714	Resistor 4.7k 1/16W Metal Oxide	VRS-CZ1JF472JY	-	-	-	-	Delete
R2715	Resistor 4.7k 1/16W Metal Oxide	VRS-CZ1JF472JY	-	-	-	-	Delete
R2716	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2717	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2718	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2719	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2720	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2721	Resistor 0 1/16W Metal Oxide	-	VRS-CZ1JF000JY	VRS-CZ1JF000JY	VRS-CZ1JF000JY	-	Add
R2722	Resistor 0 1/16W Metal Oxide	-	VRS-CZ1JF000JY	VRS-CZ1JF000JY	VRS-CZ1JF000JY	-	Add
R2723	Resistor 0 1/16W Metal Oxide	-	VRS-CZ1JF000JY	VRS-CZ1JF000JY	VRS-CZ1JF000JY	-	Add
R2724	Resistor 10 1/16W Metal Oxide	-	VRS-CZ1JF100JY	VRS-CZ1JF100JY	VRS-CZ1JF100JY	-	Add
R2725	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2726	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2727	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2728	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2733	Resistor 10k 1/16W Metal Oxide	VRS-CZ1JF103JY	-	-	-	-	Delete
R2734	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2735	Resistor 0 1/16W Metal Oxide	VRS-CZ1JF000JY	-	-	-	-	Delete
R2738	Resistor 560k 1/16W Metal Oxide	VRS-CZ1JF564JY	-	-	-	-	Delete
R2745	Resistor 10k 1/16W Metal Oxide	VRS-CZ1JF103JY	-	-	-	-	Delete

Ref No.	Description	LC-60LE830E (S81T252LE830E)	LC-60LE635E (S91T960LE635E)	LC-60LE638E (S91T960LE635E)	LC-60LE636E (S91T960LE635E)	Inter-changeabil-ity	Note
R2748	Resistor 47k 1/16W Metal Oxide	VRS-CZ1JF473JY	-	-	-	-	Delete
R2752	Resistor 15k 1/16W Metal Oxide	VRS-CZ1JF153JY	-	-	-	-	Delete
R2756	Resistor 56k 1/16W Metal Oxide	VRS-CZ1JF563JY	-	-	-	-	Delete
R2769	Resistor 47k 1/16W Metal Oxide	VRS-CZ1JF473JY	-	-	-	-	Delete
R2770	Resistor 10 1/16W Metal Oxide	VRS-CZ1JF100JY	-	-	-	-	Delete
R2779	Resistor 47k 1/16W Metal Oxide	VRS-CZ1JF473JY	-	-	-	-	Delete
R2784	Resistor 10k 1/16W Metal Oxide	VRS-CZ1JF103JY	-	-	-	-	Delete
R3358	Resistor 100 1/16W Metal Oxide	-	VRS-CZ1JF101JY	VRS-CZ1JF101JY	VRS-CZ1JF101JY	-	Add
R3422	Resistor 2.2k 1/16W Metal Oxide	VRS-CZ1JF222JY	←	←	-	-	Delete (636E Only)
R3423	Resistor 2.2k 1/16W Metal Oxide	VRS-CZ1JF222JY	←	←	-	-	Delete (636E Only)
R3533	Resistor 47 1/32W Metal Composition	-	VRK-SB1FF470JY	VRK-SB1FF470JY	VRK-SB1FF470JY	-	Add
R3534	Resistor 47 1/32W Metal Composition	-	VRK-SB1FF470JY	VRK-SB1FF470JY	VRK-SB1FF470JY	-	Add
R3535	Resistor 47 1/32W Metal Composition	-	VRK-SB1FF470JY	VRK-SB1FF470JY	VRK-SB1FF470JY	-	Add
R3536	Resistor 47 1/32W Metal Composition	-	VRK-SB1FF470JY	VRK-SB1FF470JY	VRK-SB1FF470JY	-	Add
R3537	Resistor 47 1/32W Metal Composition	-	VRK-SB1FF470JY	VRK-SB1FF470JY	VRK-SB1FF470JY	-	Add
R3538	Resistor 47 1/16W Metal Oxide	-	VRS-CZ1JF470JY	VRS-CZ1JF470JY	VRS-CZ1JF470JY	-	Add
R3539	Resistor 47 1/16W Metal Oxide	-	VRS-CZ1JF470JY	VRS-CZ1JF470JY	VRS-CZ1JF470JY	-	Add
R3540	Resistor 47 1/16W Metal Oxide	-	VRS-CZ1JF470JY	VRS-CZ1JF470JY	VRS-CZ1JF470JY	-	Add
R3541	Resistor 47 1/16W Metal Oxide	-	VRS-CZ1JF470JY	VRS-CZ1JF470JY	VRS-CZ1JF470JY	-	Add
R3542	Resistor 0 1/16W Metal Composition	-	VRK-SA1JF000JY	VRK-SA1JF000JY	VRK-SA1JF000JY	-	Add
R3543	Resistor 1.0k 1/16W Metal Oxide	-	VRS-CZ1JF102FY	VRS-CZ1JF102FY	VRS-CZ1JF102FY	-	Add
R3544	Resistor 1.0k 1/16W Metal Oxide	-	VRS-CZ1JF102FY	VRS-CZ1JF102FY	VRS-CZ1JF102FY	-	Add
R3545	Resistor 100 1/16W Metal Oxide	-	VRS-CZ1JF101JY	VRS-CZ1JF101JY	VRS-CZ1JF101JY	-	Add
R3546	Resistor 240 1/16W Metal Oxide	-	VRS-CZ1JF241FY	VRS-CZ1JF241FY	VRS-CZ1JF241FY	-	Add
R3547	Resistor 1.0k 1/16W Metal Oxide	-	VRS-CZ1JF102FY	VRS-CZ1JF102FY	VRS-CZ1JF102FY	-	Add
R3548	Resistor 1.0k 1/16W Metal Oxide	-	VRS-CZ1JF102FY	VRS-CZ1JF102FY	VRS-CZ1JF102FY	-	Add
R4402	Resistor 47k 1/32W Metal Composition	-	-	-	VRK-SB1FF473JY	-	Add
R4455	Resistor 0 1/16W Metal Composition	VRK-SA1JF000JY	←	←	-	-	Delete (636E Only)
R4457	Resistor 0 1/16W Metal Composition	-	-	-	VRK-SA1JF000JY	-	Add
R4459	Resistor 10 1/16W Metal Composition	VRK-SA1JF100JY	←	←	-	-	Delete (636E Only)

Ref No.	Description	LC-60LE830E (S81T252LE830E)	LC-60LE635E (S91T960LE635E)	LC-60LE638E (S91T960LE635E)	LC-60LE636E (S91T960LE635E)	Inter-changeabil-ity	Note
TU1102	Tuner	RTUDWA029WJQZ	←	←	-	-	Delete (636E Only)
TU1104	Tuner	-	-	-	RTUDAA072WJQZ	-	Add
X2701	Crystal	RCRSCA235WJQZY	-	-	-	-	Delete
ICON Unit							
D201	Diode CL-194S-HB8-SD-T	RH-PXA207WJZZY	-	-	-	-	Delete
D202	Diode CL-194S-HB8-SD-T	RH-PXA207WJZZY	-	-	-	-	Delete
D203	Diode CL-194S-HB8-SD-T	RH-PXA207WJZZY	-	-	-	-	Delete
R201	Resistor 130 1/16W Metal Oxide	VRS-TV1JD131JY	-	-	-	-	Delete
R202	Resistor 130 1/16W Metal Oxide	VRS-TV1JD131JY	-	-	-	-	Delete
R203	Resistor 130 1/16W Metal Oxide	VRS-TV1JD131JY	-	-	-	-	Delete
CABINET AND MECHANICAL PARTS							
	Please refer to a Parts Guide.						
SUPPLIED ACCESSORIES/PACKING PARTS (NOT REPLACEMENT ITEM)							
	Please refer to a Parts Guide.						
SERVICE JIG (USE FOR SERVICING)							
	Please refer to a Parts Guide.						

Interchangeability					
A:	Completely interchangeable	OLD = NEW	C:	Interchangeable from NEW to OLD	NEW → OLD
B:	Interchangeable from OLD to NEW	OLD → NEW	D:	Not interchangeable	NEW X OLD

SAFETY PRECAUTION

IMPORTANT SERVICE SAFETY PRECAUTION

■ **Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:**

■WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

CAUTION: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE REPLACE ONLY WITH SAME TYPE FUSE.

F101 (250V 5A)

■BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

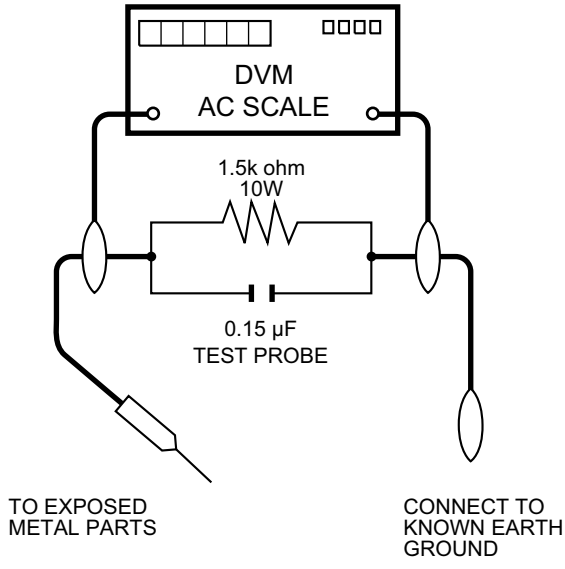
Before returning the receiver to the user, perform the following safety checks:

3. Inspect all lead dress to make certain that leads are not pinched, and check that hardware is not lodged between the chassis and other metal parts in the receiver.
4. Inspect all protective devices such as non-metallic control knobs, insulation materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
5. To be sure that no shock hazard exists, check for leakage current in the following manner.

- Plug the AC cord directly into a 120 volt AC outlet.
- Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15μF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to an earth ground.
- Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity or measure the AC voltage drop across the resistor.
- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.

 All checks must be repeated with the AC cord plug connection reversed. (If necessary, a nonpolarized adaptor plug must be used only for the purpose of completing these checks.)

 Any reading of 0.75 Vrms (this corresponds to 0.5 mA rms AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the monitor to the owner.



SAFETY NOTICE

Many electrical and mechanical parts in LCD color television have special safety-related characteristics.

These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by " ⚠ " and shaded areas in the Replacement Parts List and Schematic Diagrams.

For continued protection, replacement parts must be identical to those used in the original circuit.

The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

PRECAUTIONS A PRENDRE LORS DE LA REPARATION

■ **Ne peut effectuer la réparation qu' un technicien spécialisé qui s'est parfaitement accoutumé à toute vérification de sécurité et aux conseils suivants.**

■ AVERTISSEMENT

1. N'entreprendre aucune modification de tout circuit. C'est dangereux.
2. Débrancher le récepteur avant toute réparation.

CAUTION: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE REPLACE ONLY WITH SAME TYPE FUSE.

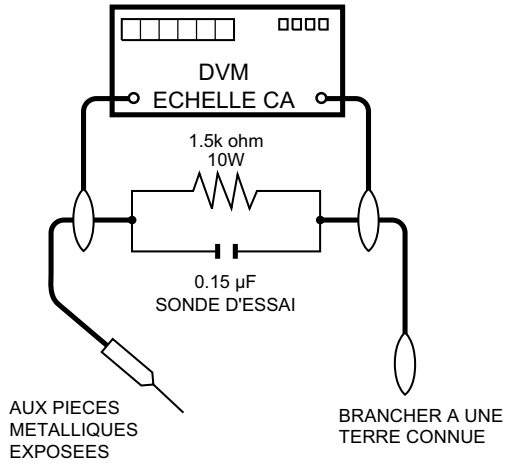
F101 (250V 5A)

■ VERIFICATIONS CONTRE L'INCEN-DIE ET LE CHOC ELECTRIQUE

Avant de rendre le récepteur à l'utilisateur, effectuer les vérifications suivantes.

3. Inspecter tous les faisceaux de câbles pour s'assurer que les fils ne soient pas pincés ou qu'un outil ne soit pas placé entre le châssis et les autres pièces métalliques du récepteur.
4. Inspecter tous les dispositifs de protection comme les boutons de commande non-métalliques, les isolants, le dos du coffret, les couvercles ou blindages de réglage et de compartiment, les réseaux de résistancecapacité, les isolateurs mécaniques, etc.
5. S'assurer qu'il n'y ait pas de danger d'électrocution en vérifiant la fuite de courant, de la facon suivante:

- Brancher le cordon d'alimentation directem-ent à une prise de courant de 120V. (Ne pas utiliser de transformateur d'isolation pour cet essai).
- A l'aide de deux fils à pinces, brancher une résistance de 1.5 kΩ 10 watts en parallèle avec un condensateur de 0.15μF en série avec toutes les pièces métalliques exposées du coffret et une terre connue comme une conduite électrique ou une prise de terre branchée à la terre.
- Utiliser un voltmètre CA d'une sensibilité d'au moins 5000Ω/V pour mesurer la chute de tension en travers de la résistance.
- Toucher avec la sonde d'essai les pièces métalliques exposées qui présentent une voie de retour au châssis (antenne, coffret métallique, tête des vis, arbres de commande et des boutons, écusson, etc.) et mesurer la chute de tension CA en-travers de la résistance. Toutes les vérifications doivent être refaites après avoir inversé la fiche du cordon d'alimentation. (Si nécessaire, une prise d'adpatation non polarisée peut être utilisée dans le but de terminer ces vérifications.)
 La tension de pointe mesurèe ne doit pas dépasser 0.75V (correspondante au courant CA de pointe de 0.5mA).
 Dans le cas contraire, il y a une possibilité de choc électrique qui doit être supprimée avant de rendre le récepteur au client.



AVIS POUR LA SECURITE

De nombreuses pièces, électriques et mécaniques, dans les téléviseur ACL présentent des caractéristiques spéciales relatives à la sécurité, qui ne sont souvent pas évidentes à vue. Le degré de protection ne peut pas être nécessairement augmentée en utilisant des pièces de remplacement étalonnées pour haute tension, puissance, etc.
Les pièces de remplacement qui présentent ces caractéristiques sont identifiées dans ce manuel; les pièces électriques qui présentent ces particularités sont identifiées par la marque "⚠" et hachurées dans la liste des pièces de remplacement et les diagrammes schématiques.

Pour assurer la protection, ces pièces doivent être identiques à celles utilisées dans le circuit d'origine. L'utilisation de pièces qui n'ont pas les mêmes caractéristiques que les pièces recommandées par l'usine, indiquées dans ce manuel, peut provoquer des électrocutions, incendies, radiations X ou autres accidents.

PRECAUTIONS FOR USING LEAD-FREE SOLDER

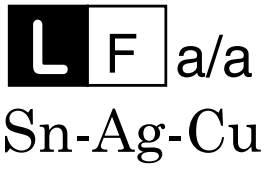
■Employing lead-free solder

- "PWBs" of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.

 Example:



Indicates lead-free solder of tin, silver and copper.



Indicates lead-free solder of tin, silver and copper.

■Using lead-free wire solder

- When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.

 As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40 °C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service branch in your area.

■Soldering

- As the melting point of lead-free solder (Sn-Ag-Cu) is about 220 °C which is higher than the conventional lead solder by 40 °C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.

 Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to turn on and off the power of the bit as required.

 If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.

 When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

- Be careful when replacing parts with polarity indication on the PWB silk.

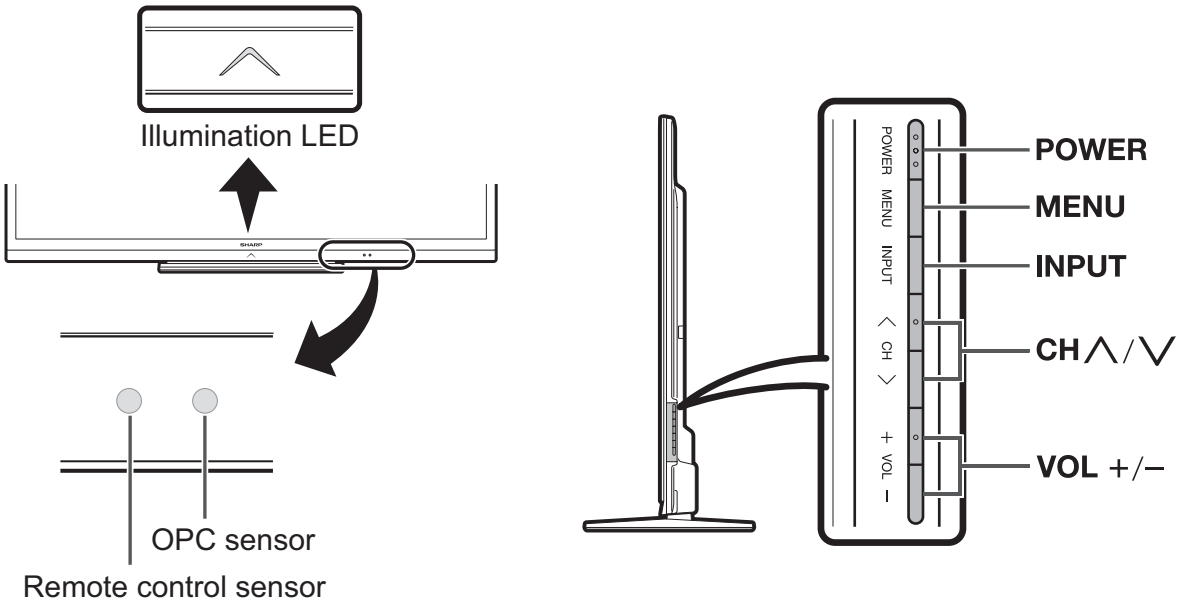
Lead-free wire solder for servicing

PARTS CODE	PRICE RANK	PART DELIVERY	DESCRIPTION
ZHNDAi123250E	BL	J	ϕ0.3mm 250g (1roll)
ZHNDAi126500E	BK	J	ϕ0.6mm 500g (1roll)
ZHNDAi12801KE	BM	J	ϕ1.0mm 1kg (1roll)

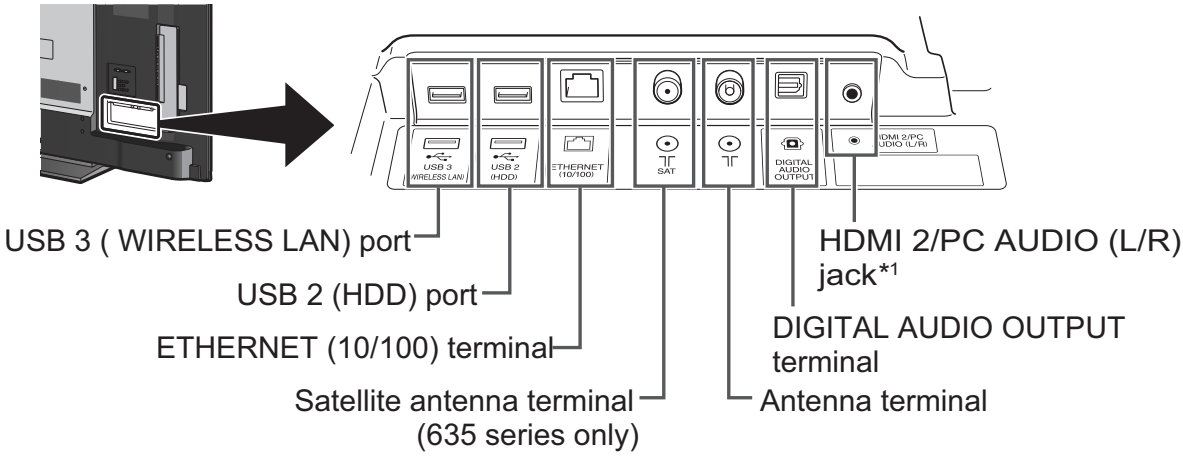
CHAPTER 1. OPERATION MANUAL

[1] Parts Name

TV (front/side view)

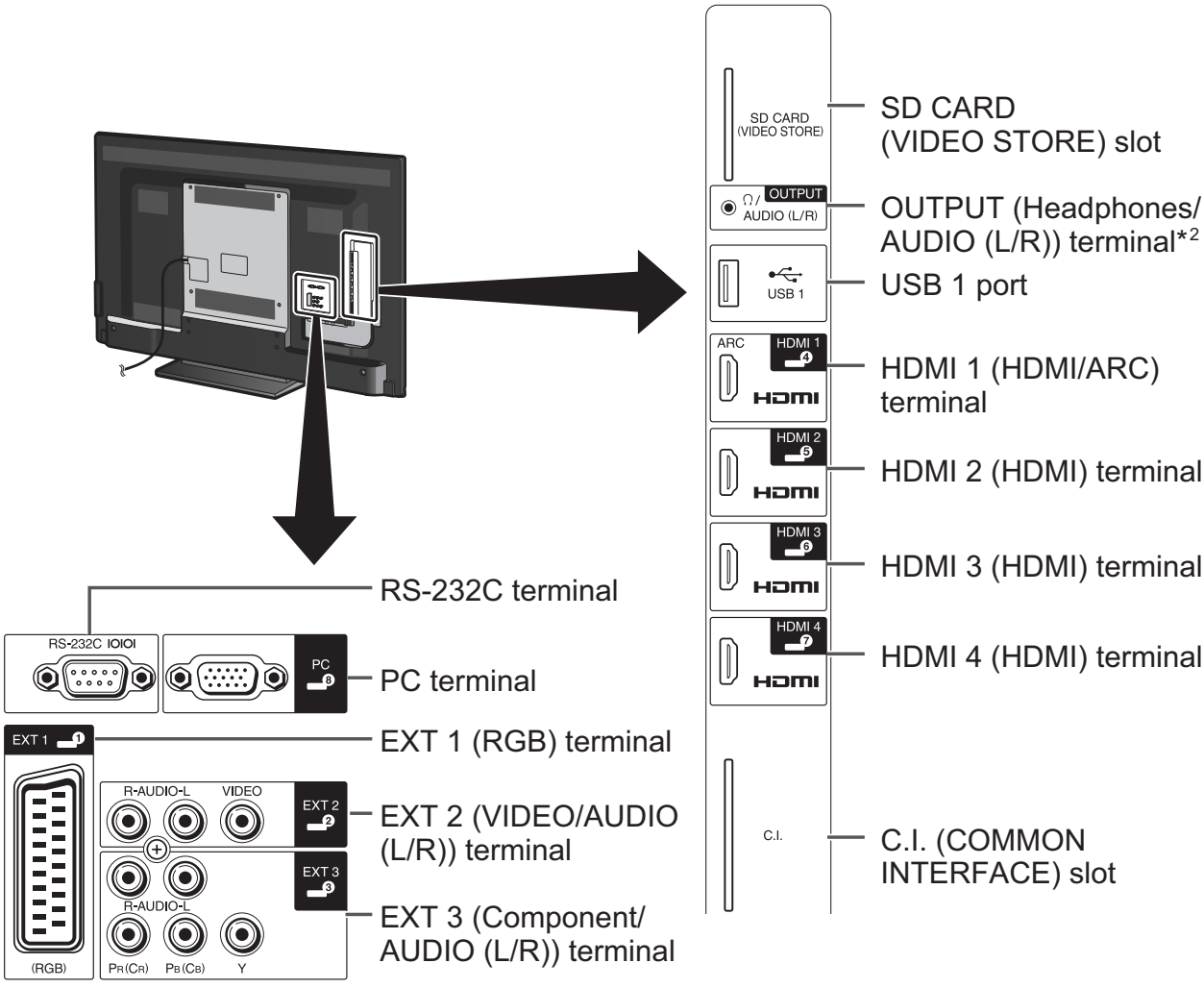


TV (rear view)



- The HDMI 2 and PC terminals can both use the same audio input terminal (HDMI 2/PC AUDIO (L/R)). However, the proper item must be selected in the “Audio select” menu (r

TV (rear view) — continued



J When the headphone is connected to the OUTPUT terminal, the audio can be output from the speakers.

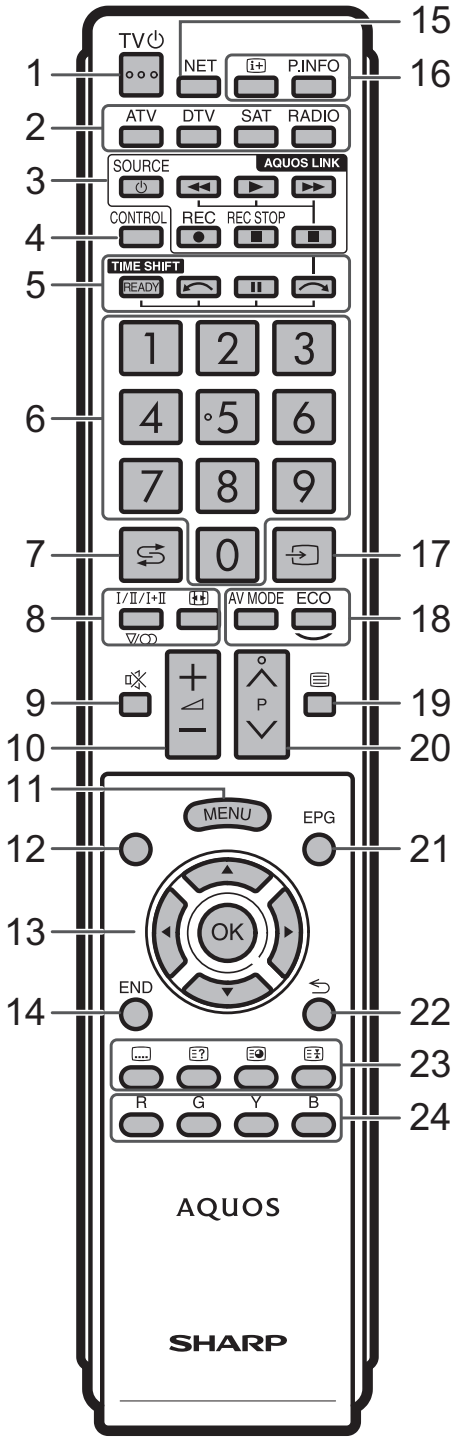
WARNING

Excessive sound pressure from earphones and headphones can cause hearing loss. Do not set the volume at a high level. Hearing experts advise against extended listening at high volume levels.

Important information:

Satellite services are only available for the 635 model series.

Remote control unit



1 TV⏻ **(Standby/On)**

2 **ATV**
Access conventional analogue TV mode.

DTV
Access digital TV mode.

SAT
Access satellite mode.

RADIO
DTV/SAT: Switch between radio and data mode.
When only data broadcasting (no radio broadcasting) is transmitted by DVB, the radio broadcasting will be skipped.

3 **AQUOS LINK buttons**

4 **CONTROL**
Display a panel to operate some functions on the screen.
NET: “NET MENU” screen on/off.

5 **TIME SHIFT (READY/↶/ ⏸ /↷)**

Temporarily record a programme you are watching.

6 **Numeric buttons 0–9**
Set the channel. Enter desired numbers.
Set the page in teletext mode.
- When the five Nordic countries (Sweden, Norway, Finland, Denmark or Iceland) are selected in the country setting from initial auto installation, DTV services are four digits.
 When another country is selected, DTV services are three digits.

7 **(Flashback)**
Return to the previously selected channel or external input.

8 **(Sound mode)**
Select a sound multiplex mode.

(Wide mode)
Select a wide mode.

9 **(Mute)**
TV sound on/off.

10 +/- **(Volume)**
Increase/decrease TV volume.

11 **MENU**
"Menu" screen on/off.

12 **None**
This button does not work on this model.

13 ▲/▼/◀/▶ **(Cursor)**
Select a desired item.

OK
Execute a command.
ATV/DTV/SAT: Display "CH list" when no other "Menu" screen is running.

14 **END**
ATV/DTV/SAT: Exit the "Menu" screen.
NET: Return to the start page.

15 **NET**
Access Net TV.

16 **(Display information)**
Display the station information (channel number, signal, etc.) on the screen.

P. INFO
Display programme information transmitted through digital video broadcasting (DTV/SAT only).

17 **(INPUT)**
Select an input source.

18 **AV MODE**
Select audio/video settings.

ECO(Standard/Advanced/Off)
Select "Energy save" setting.

19 **(Teletext)**
ATV: Display analogue teletext.
DTV/SAT: Select MHEG-5 or teletext for DTV/SAT.

20 :P∧/∨
ATV/DTV/SAT: Select the TV channel.
NET: Scrolls pages up/down.

21 **EPG**
DTV/SAT: Display the EPG screen.

22 **(Return)**
ATV/DTV/SAT: Return to the previous "Menu" screen.
NET: Return to the previous page (this may not function for some services).

23 **Buttons for useful operations**

(Subtitle)
Switch subtitle languages on/off.

(Reveal hidden teletext)

(Subpage)

(Freeze/Hold)
Freeze a moving image on the screen.
Teletext: Stop updating teletext pages automatically or release the hold mode.

24 **R/G/Y/B (Colour) buttons**
The coloured buttons are correspondingly used to select the coloured items on the screen (e.g., EPG, MHEG-5, teletext).

Important information:
Satellite services are only available for the 635 model series.

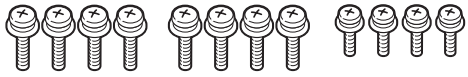
[2] OPERATION MANUAL

Attaching the stand unit

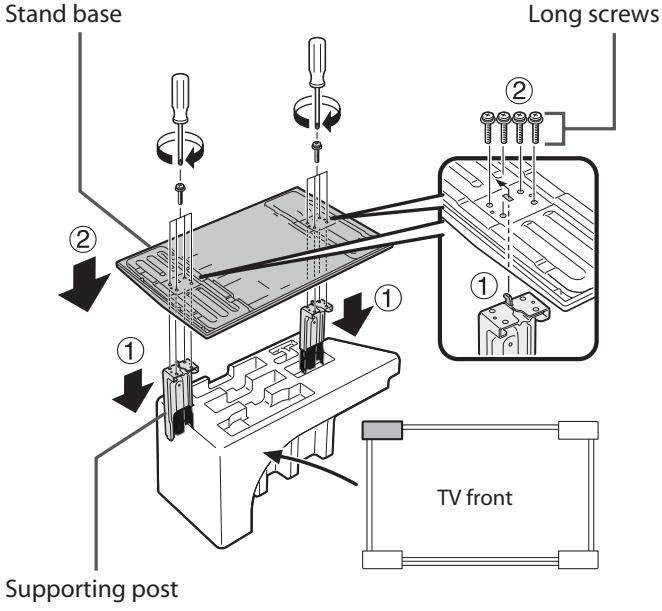
- Before attaching (or detaching) the stand, unplug the AC cord.
- Before performing work, spread cushioning over the surface on which you will be laying the TV. This will prevent it from being damaged.

CAUTION
- Attach the stand in the correct direction.
- Be sure to follow the instructions. Incorrect installation of the stand may result in the TV falling over .

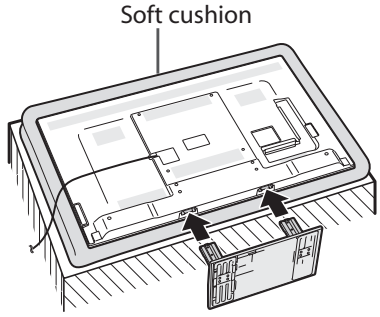
1 Confirm that there are twelve screws (eight long screws and four short screws) supplied with the stand unit.



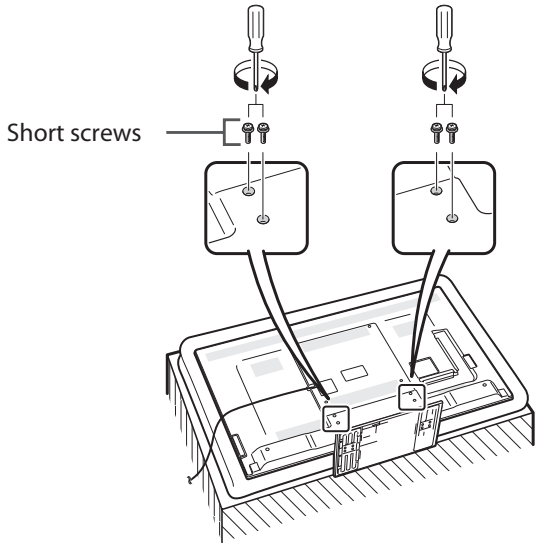
2 ① Set the supporting post for the stand unit onto the polystyrene foam.
② Attach the stand base to the supporting post.
③ Insert and tighten the eight screws into the eight holes on the bottom of the stand base.
- Hold the stand unit securely with one hand, and then tighten the screws.



3 Insert the stand into the openings on the bottom of the TV (hold the stand so it will not drop from the edge of the base area).
- Make sure that the stand is firmly inserted into the TV. Improper installation may result in tilting of the TV set.



4 Insert and tighten the four screws into the four holes on the rear of the TV.



CHAPTER 2. SPECIFICATIONS

[1] SPECIFICATIONS (LC-60LE635E/636E)

Specifications

Item			LCD COLOUR TV (60"/152 cm), LC-60LE635E LC-60LE635RU LC-60LE636E LC-60LE636S
LCD panel			152 cm (60") X-Gen panel
Resolution			1,920 x 1,080 x 3 dots
Video colour system			PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60
TV function	TV-standard	Analogue	CCIR (B/G, I, D/K, L/L')
		Digital (635 series)	DVB-T (2K/8K OFDM), DVB-C, DVB-S/S2
		Digital (636 series)	DVB-T (2K/8K OFDM), DVB-T2 (1K/2K/4K/8K/16K/32K OFDM), DVB-C
	Receiving channel	VHF/UHF	IR A ch–E69 ch (Digital), E2–E69 ch, F2–F10 ch, I21–I69 ch, IR A–IR J ch
		CATV	Hyper-band, S1–S41 ch
		Satellite (635 series only)	950–2150 MHz*1
	TV-tuning system		Auto Preset 999 ch (non-Nordic [DTV]), Auto Preset 9999 ch (Nordic [DTV]), Auto Preset 99 ch (ATV), Auto Label, Auto Sort, Auto Preset 9999 ch (SAT [635 series only])
	Stereo/Bilingual		A2/NICAM
Audio amplifier			10 W x 2
Speaker			(150 mm x 32 mm) x 2
Terminals	Antenna	VHF/UHF	75Ω Din type (analogue & digital)
		Satellite (635 series only)	75 Ω F type (DVB-S/S2)
	RS-232C		D-sub 9 pin male connector
	EXT 1		SCART (AV input, Y/C input, RGB input, TV output)
	EXT 2		RCA pin (AV input/AUDIO L/R)
	EXT 3		Component (AV input/Audio L/R)
	PC		mini D-sub 15 pin
	HDMI 1 (EXT 4)		HDMI (ARC)
	HDMI 2 (EXT 5)		HDMI
	HDMI 3 (EXT 6)		HDMI
	HDMI 4 (EXT 7)		HDMI
	USB 1		USB
	USB 2 (HDD)		USB
	USB 3 (WIRELESS LAN)		USB
	ETHERNET (10/100)		Network connector
	HDMI 2/PC AUDIO (L/R)		Ø 3.5 mm jack*2
	DIGITAL AUDIO OUTPUT		Optical S/PDIF digital audio output
	C. I. (Common Interface)		EN50221, R206001, CI Plus specification
	OUTPUT/Headphones		RCA pin (AUDIO L/R)/Ø 3.5 mm jack (audio output)
	SD CARD (VIDEO STORE)		SD card
OSD language			Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Norwegian, Polish, Portuguese, Russian, Slovak, Slovene, Spanish, Swedish, Turkish, Ukrainian, Romanian
Power requirement			AC 220-240 V, 50 Hz
Power consumption (method IEC62087)			168 W (0.1 W standby*3)
Weight			30.0 kg (without stand) 33.0 kg (with stand)
Operating temperature			0 °C to + 40 °C

*1 The satellite channel's frequency may vary according to satellites and antennas.
*2 The HDMI 2 and PC terminals can both use the same audio input terminal.

- Standby power consumption applies when the TV is set to not receive EPG data.

As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

[2] SPECIFICATIONS(LC-60LE638E)

Specifications

Item			LCD COLOUR TV (60"/152 cm), LC-60LE638E
LCD panel			152 cm (60") X-Gen panel
Resolution			1,920 x 1,080 x 3 dots
Video colour system			PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60
TV function	TV-standard	Analogue	CCIR (B/G, I, D/K, L/L')
		Digital	DVB-T (2K/8K OFDM), DVB-C, DVB-S/S2
	Receiving channel	VHF/UHF	IR A ch–E69 ch (Digital), E2–E69 ch, F2–F10 ch, Hyper-band, S1–S41 ch
		CATV	I21–I69 ch, IR A–IR J ch
		Satellite	950–2150 MHz*1
	TV-tuning system		Auto Preset 999 ch (non-Nordic [DTV]), Auto Preset 9999 ch (Nordic [DTV]), Auto Preset 99 ch (ATV), Auto Label, Auto Sort, Auto Preset 9999 ch (SAT)
	Stereo/Bilingual		A2/NICAM
Audio amplifier			10 W x 2
Speaker			(150 mm x 32 mm) x 2
Terminals	Antenna	VHF/UHF	75Ω Din type (analogue & digital)
		Satellite	75Ω F type (DVB-S/S2)
	RS-232C		D-sub 9 pin male connector
	EXT 1		SCART (AV input, Y/C input, RGB input, TV output)
	EXT 2		RCA pin (AV input/AUDIO L/R)
	EXT 3		Component (AV input/Audio L/R)
	PC		mini D-sub 15 pin
	HDMI 1 (EXT 4)		HDMI (ARC)
	HDMI 2 (EXT 5)		HDMI
	HDMI 3 (EXT 6)		HDMI
	HDMI 4 (EXT 7)		HDMI
	USB 1		USB
	USB 2 (HDD)		USB
	USB 3 (WIRELESS LAN)		USB
	ETHERNET (10/100)		Network connector
	HDMI 2/PC AUDIO (L/R)		Ø 3.5 mm jack*2
	DIGITAL AUDIO OUTPUT		Optical S/PDIF digital audio output
	C. I. (Common Interface)		EN50221, R206001, CI Plus specification
	OUTPUT/Headphones		RCA pin (AUDIO L/R)/Ø 3.5 mm jack (audio output)
	SD CARD (VIDEO STORE)		SD card
OSD language			Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Norwegian, Polish, Portuguese, Russian, Slovak, Slovene, Spanish, Swedish, Turkish, Ukrainian, Romanian
Power requirement			AC 220–240 V, 50 Hz
Power consumption (method IEC62087)			168 W (0.1 W standby*3)
Weight			30.0 kg (without stand) 33.0 kg (with stand)
Operating temperature			0 °C to + 40 °C

*1 The satellite channel's frequency may vary according to satellites and antennas.
*2 The HDMI 2 and PC terminals can both use the same audio input terminal.
*3 Standby power consumption applies when the TV is set to not receive EPG data.

- As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

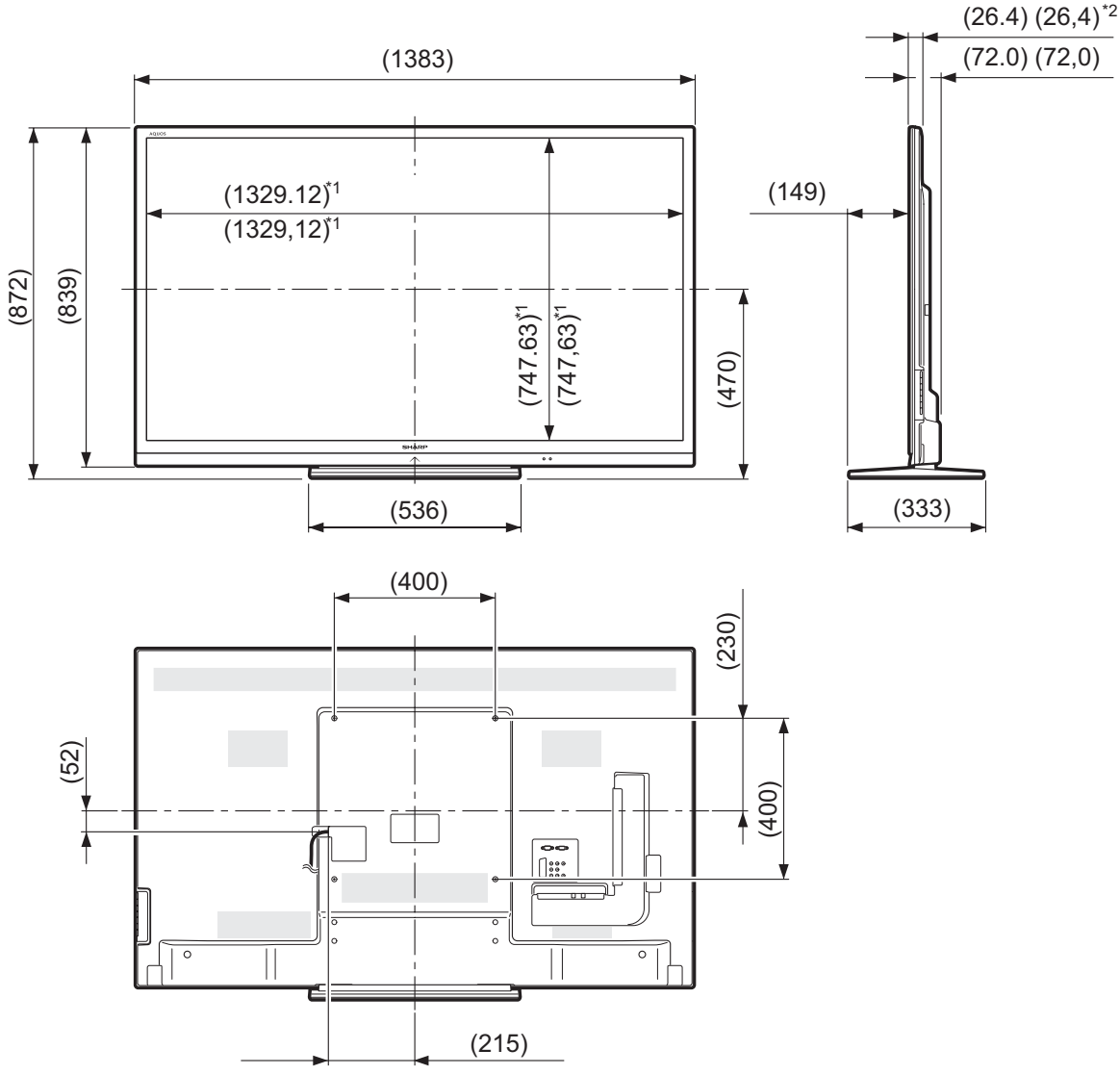
CHAPTER 3. DIMENSIONS

[1] DIMENSIONS (LC-60LE635E/636E)

Dimensional drawings

LC-60LE635E
LC-60LE635RU
LC-60LE636E
LC-60LE636S

Unit:mm



*1 Active area
*2 Thinnest part

NOTE

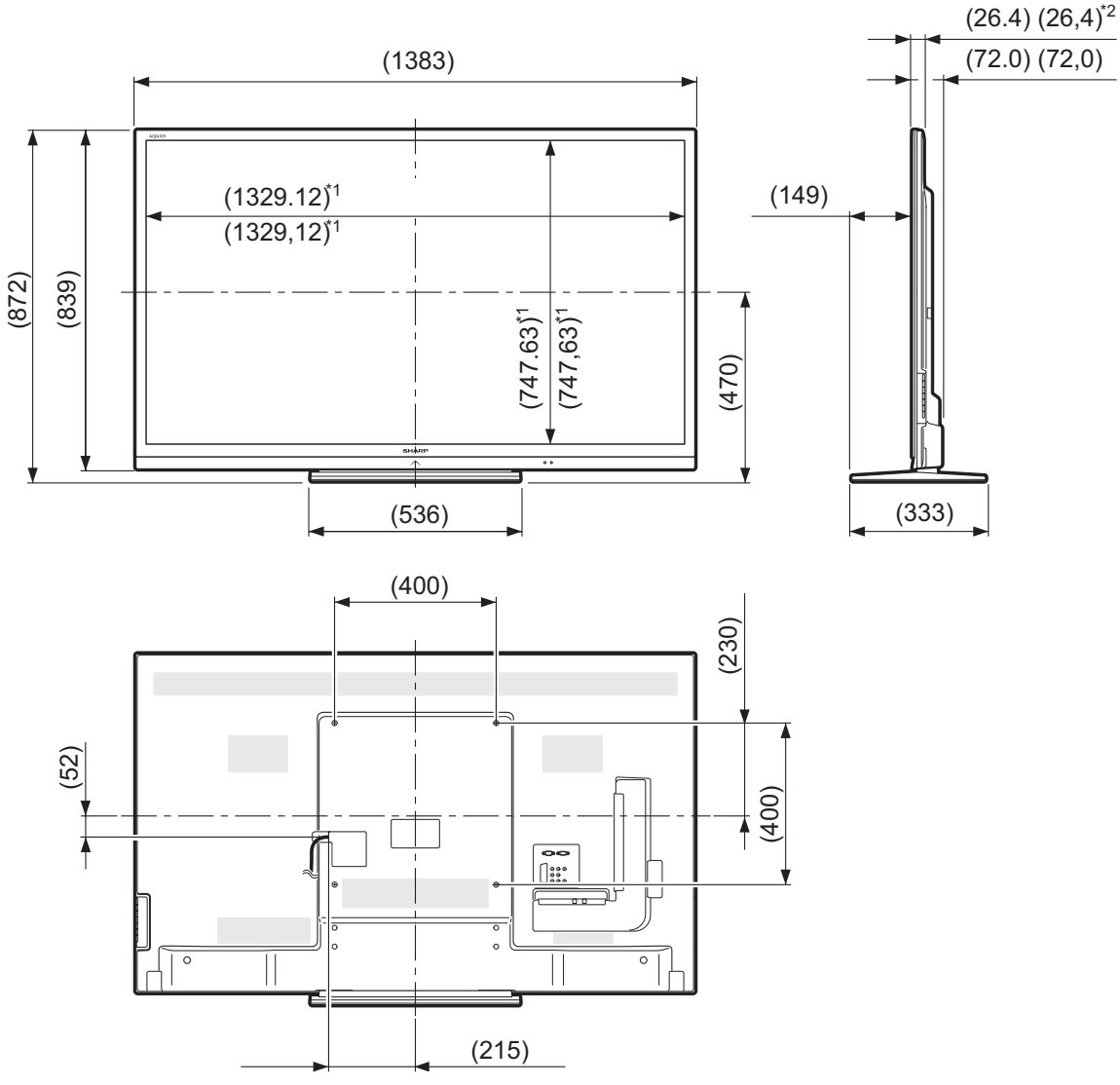
Dimensions do not include protrusions such as screws and some parts.

[2] DIMENSIONS (LC-60LE638E)

Dimensional drawings

LC-60LE638E

Unit:mm



*1 Active area
*2 Thinnest part

NOTE

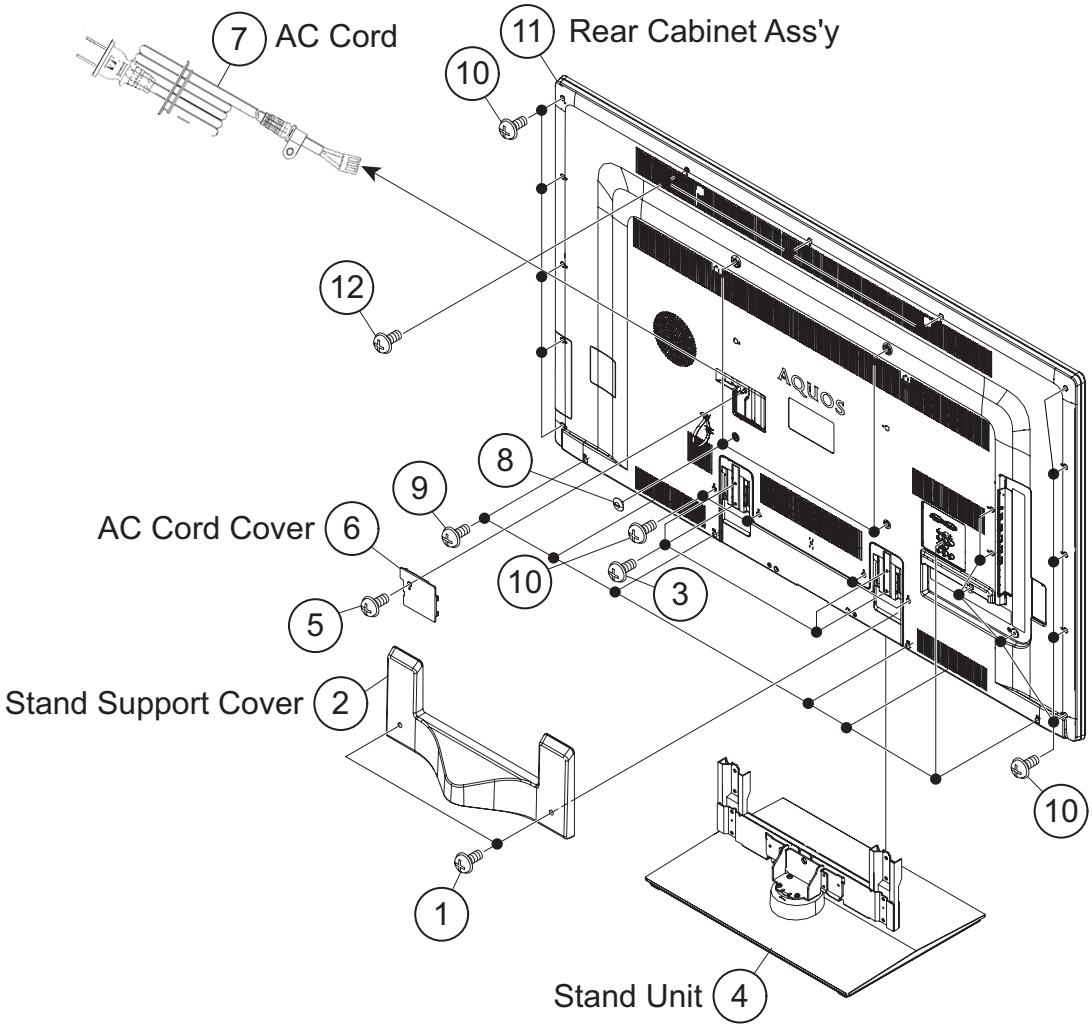
- Dimensions do not include pr otrusions such as scr ews and some parts.

CHAPTER 4. REMOVING OF MAJOR PARTS

[1] REMOVING OF MAJOR PARTS (LC-60LE830E,RU/831E,S/833E)

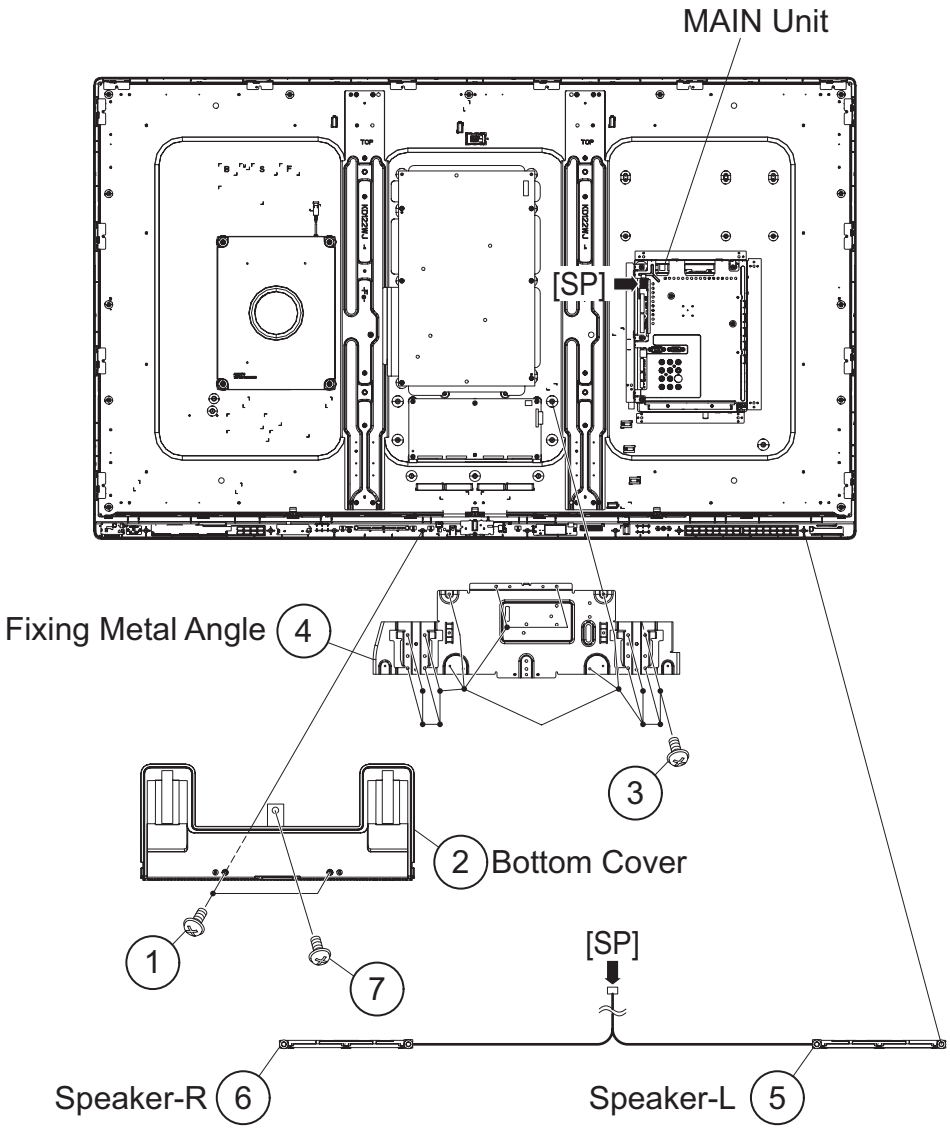
1. Removing of Stand Unit and Rear Cabinet Ass'y.

1. Remove the 2 lock screws ① and detach the Stand Support Cover ②.
2. Remove the 4 lock screws ③ and detach the Stand Unit ④.
3. Remove the 1 lock screw ⑤ and detach the AC Cord Cover ⑥.
4. Disconnect AC Cord ⑦.
5. Remove the 4 Vesa Hole Covers ⑧, 7 lock screws ⑨ and 18 lock screws ⑩ and 3 lock screws ⑫ and detach the Rear Cabinet Ass'y ⑪.



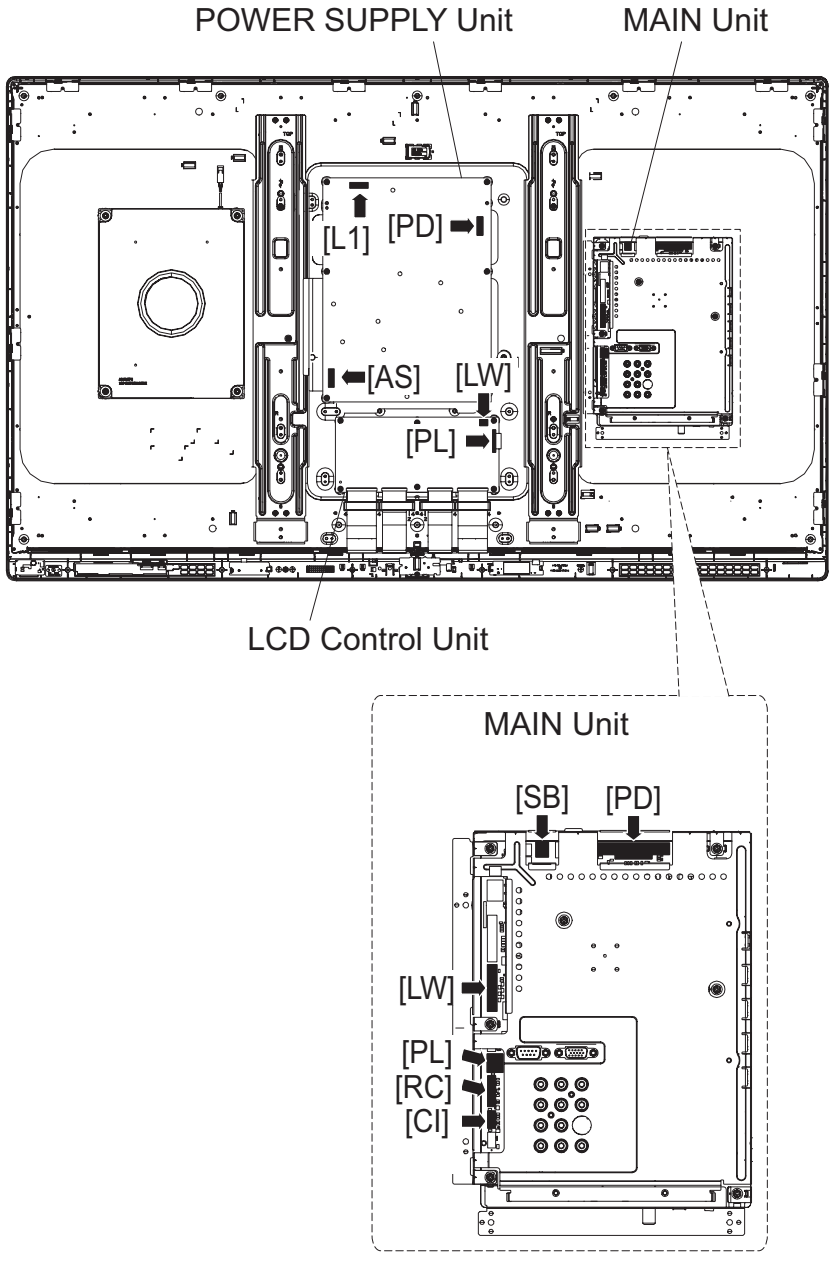
2. Removing of Speaker-L/R.

1. Remove the 2 lock screws ① and the 1 lock screw ⑦ detach the Bottom Cover ②.
2. Remove the 14 lock screws ③ and detach the Fixing Metal Angle ④.
3. Disconnect SP wire.
4. Detach the Speaker-L ⑤, Speaker-R ⑥.



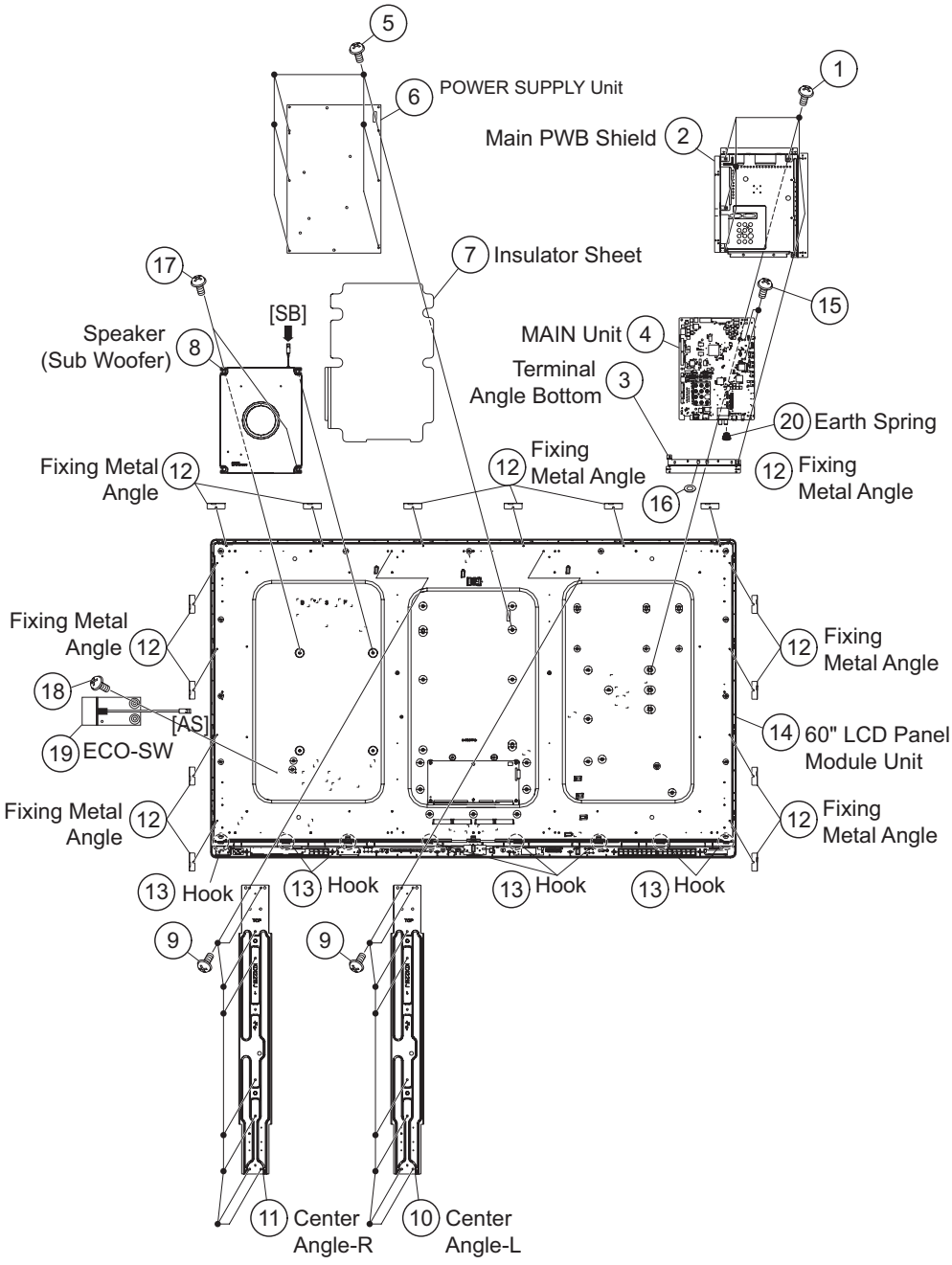
3. Removing of Connectors.

1. Disconnect the following connectors from the MAIN Unit. (SB, PD, LW, PL, RC, CI)
2. Disconnect the following connectors from the POWER SUPPLY Unit. (PD, L1, AS)
3. Disconnect the following connectors from the LCD Control Unit. (LW, PL)



4. Removing of MAIN Unit, POWER/LED Drive Unit, speaker (Sub Woofer), 60” LCD Panel Module Unit.

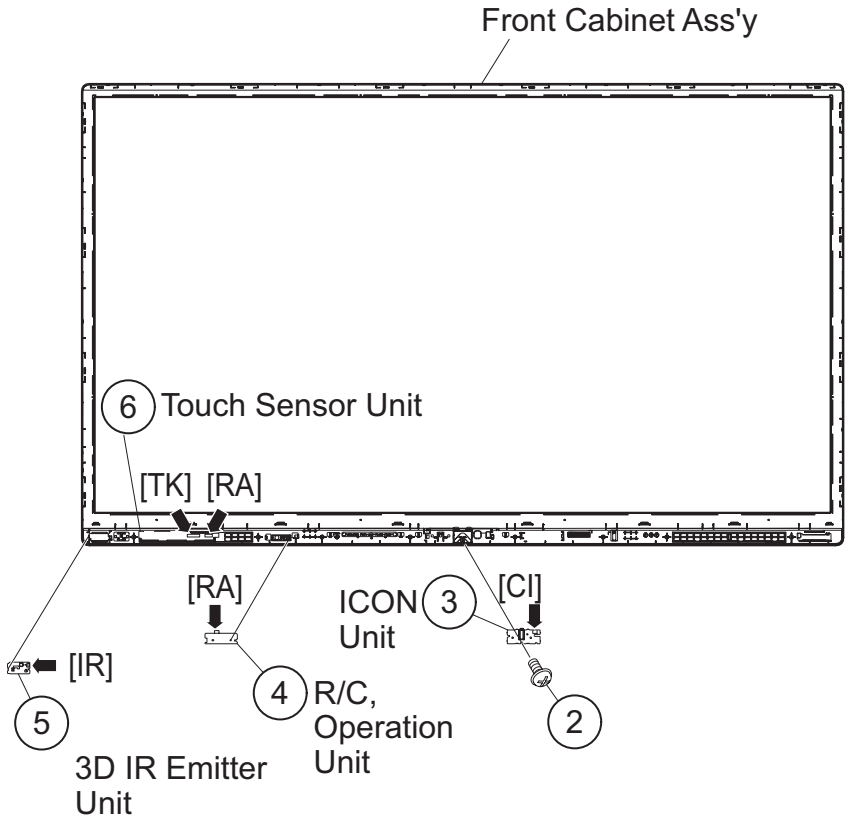
1. Remove the 5 lock screws ① and detach the Main PWB Shield ② .
2. Remove the 2 lock screws ⑮ and detach the MAIN Unit ④.
3. Remove the Hexagon screw ⑯ and detach the Terminal Angle Bottom ③ and Earhe Spring ⑳.(Only LC-60LE630E,RU)
4. Remove the 6 lock screws ⑤ and detach the POWER SUPPLY Unit ⑥ and Insulator Sheet ⑦.
5. Remove the 2 lock screws ⑰ and detach the Speaker (Sub Woofer) ⑧.
6. Remove the 16 lock screws ⑨ and detach the Center Angle-L ⑩, Center Angle-R ⑪.
7. Detach the 14 Fixing Metal Angles ⑫.
8. Remove the 8 Hooks ⑬ and detach the 60” LCD Panel Module Unit ⑭.
9. Remove the 1 lock screw ⑱ and detach the ECO-SW ⑲.



5. Removing of R/C, Operation Unit, ICON Unit, 3D IR Emitter Unit, Touch Sensor Unit.

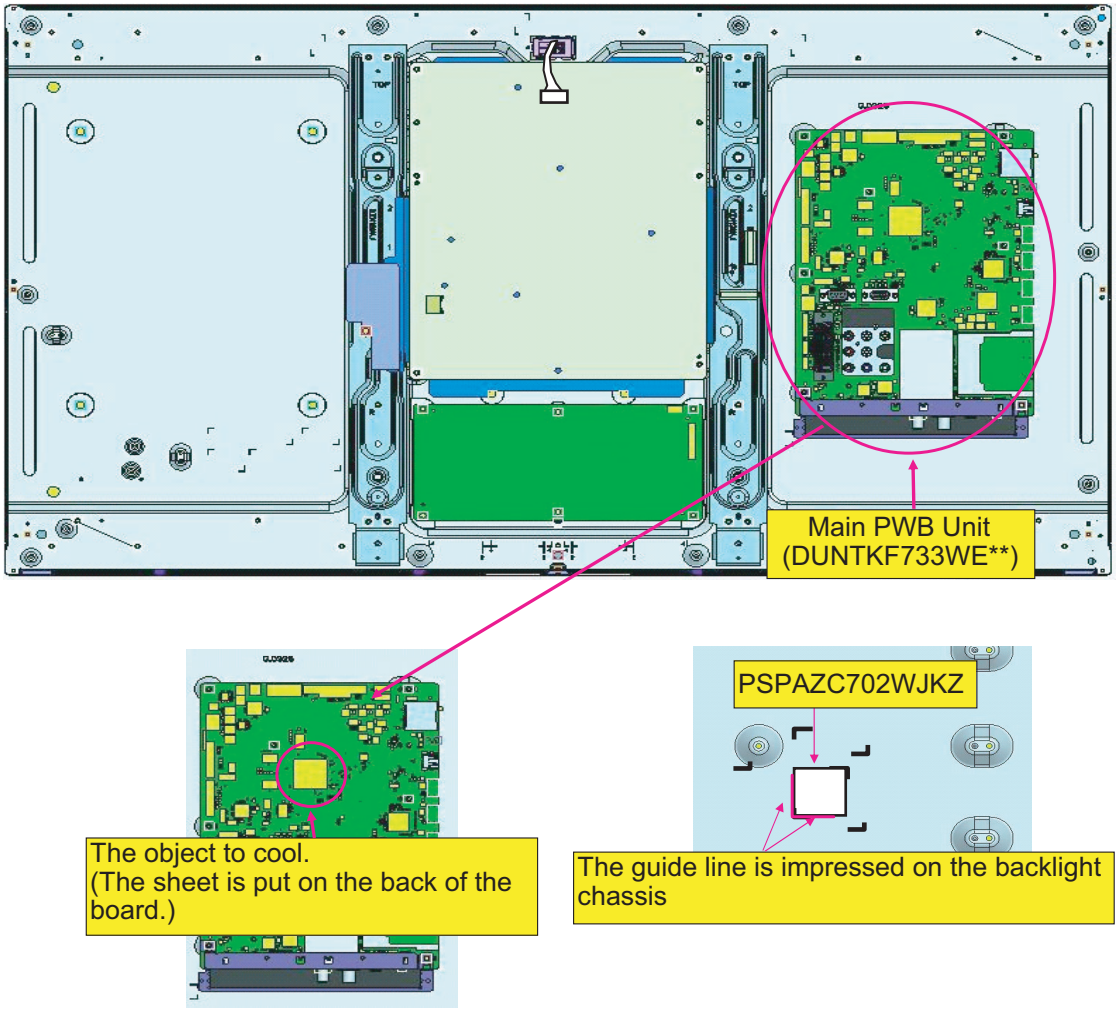
1. Remove the 1 lock screw ② and detach the ICON Unit ③.
2. Detach the R/C, Operation Unit ④.
3. Detach the 3D IR Emitter Unit ⑤.
4. Detach the Touch Sensor Unit ⑥.

NOTE: The Touch Sensor unit ⑥ reuse will be impossible, once it is stuck on front cabinet and exfoliates.

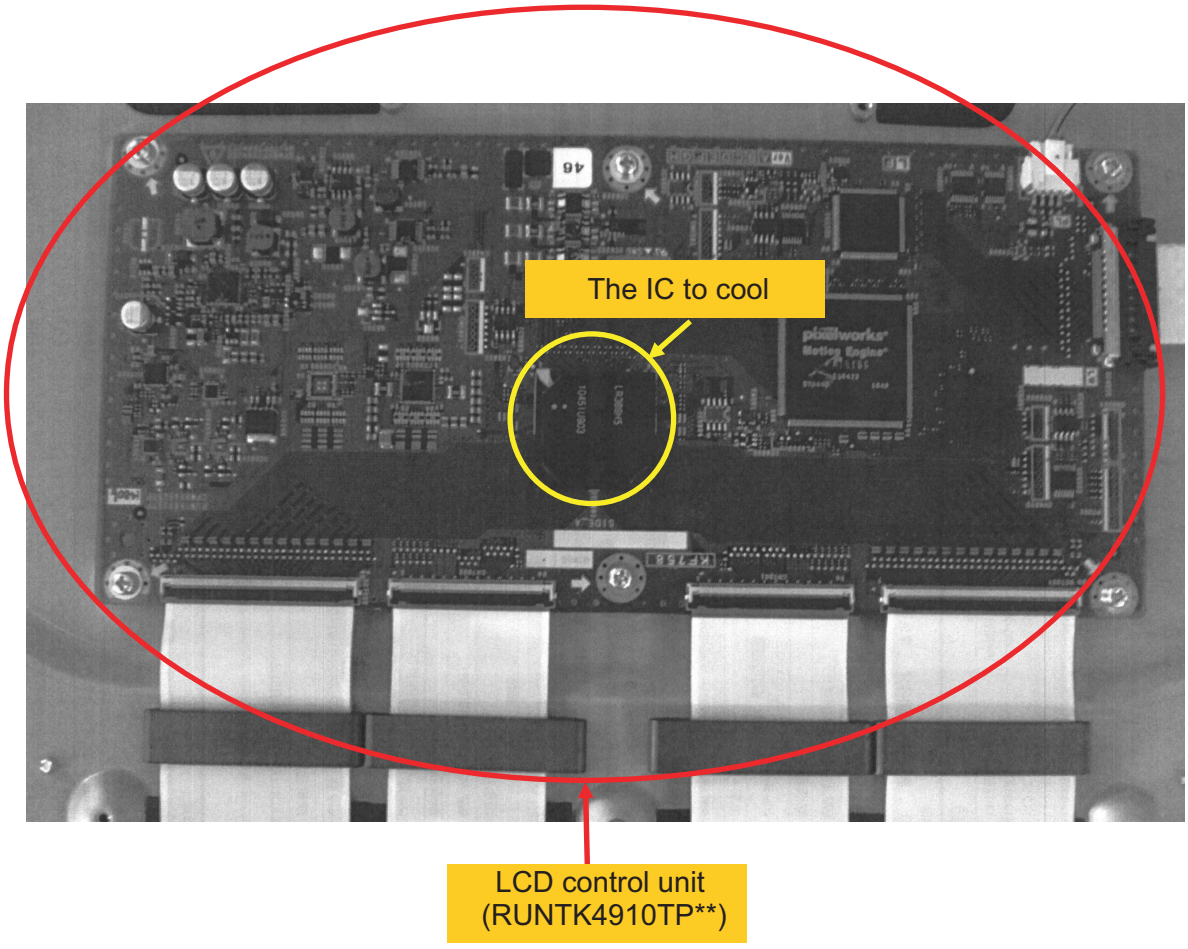


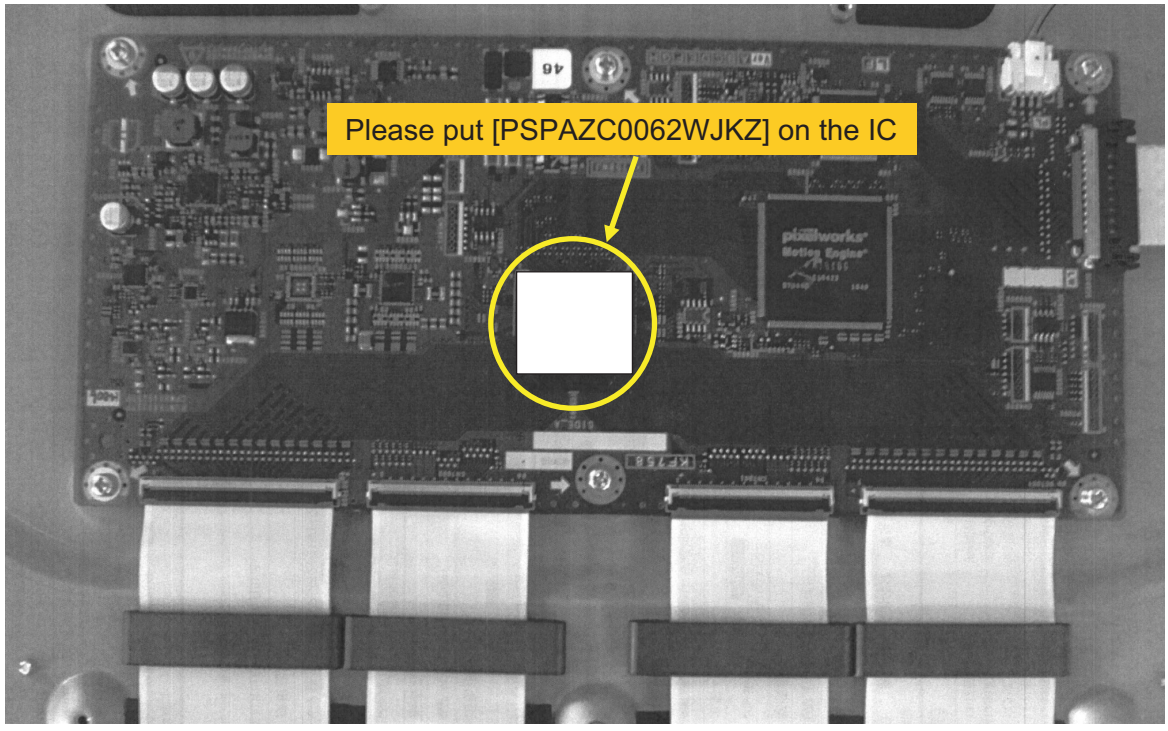
[2] The location putting on the heat measure sheet

1. MAIN PWB Unit



2. LCD Control Unit

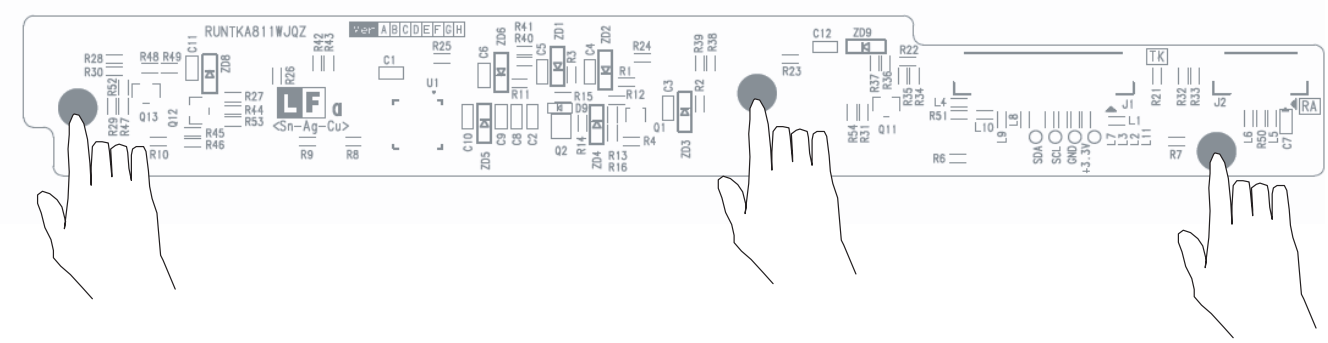




[3] Precautions for assembly

1. Attaching the touch sensor

1. After removing the release paper, attach the touch sensor keeping out dust and dirt.
2. Press the 3 circular silk positions on the PWB to fix the touch sensor. There is no problem if the pressing positions are slightly misaligned. However, do not press the connectors directly since they are very easy to break.

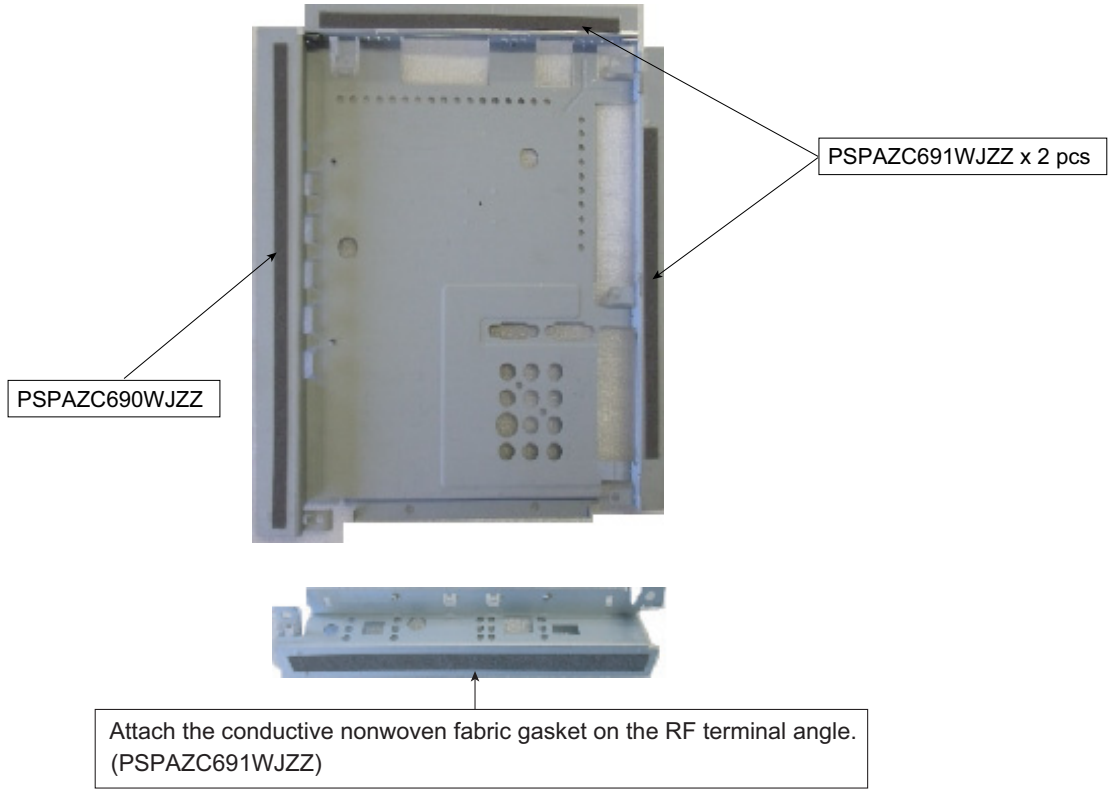


2. Points to be checked and precautions when servicing the unit

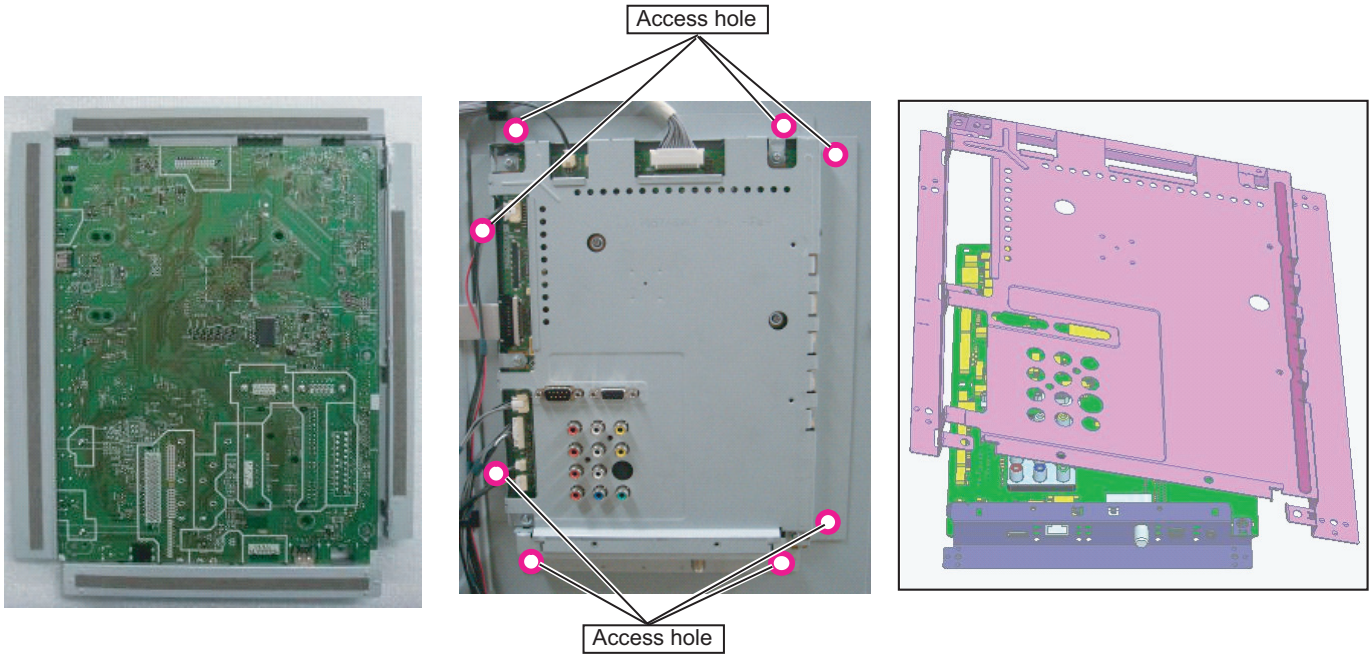
Mount the main PWB Ass'y on the backlight chassis and check that the EMI-prevention parts are not peeled and twisted from the access holes. (The EMI-prevention parts, conductive nonwoven fabric gaskets, must be seen from the access holes.)

[Countermeasure]

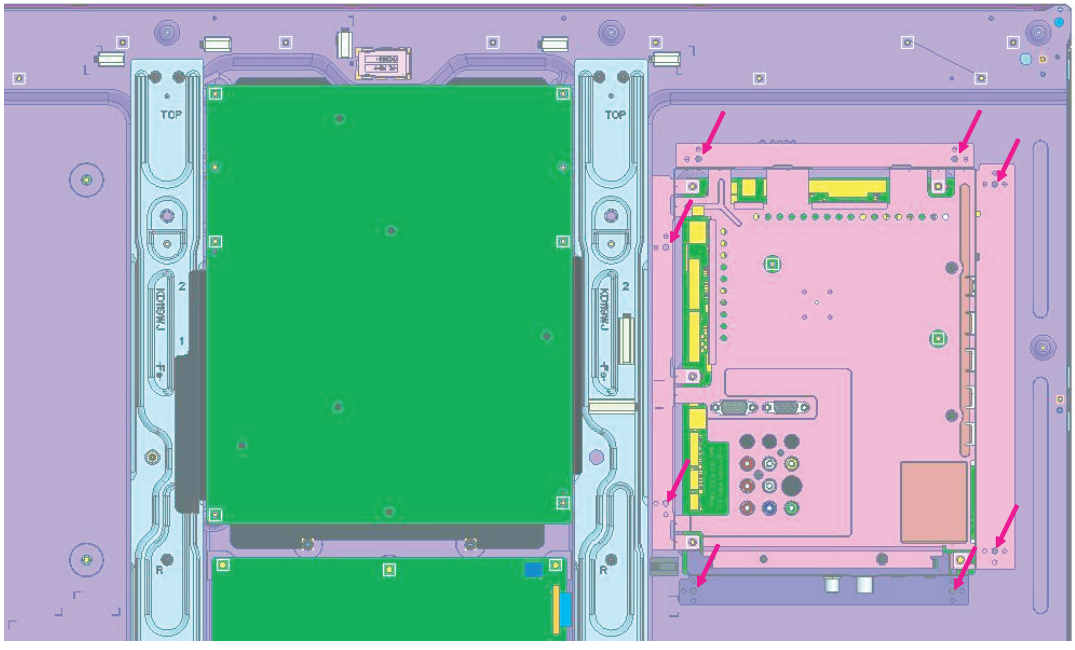
Attach the conductive nonwoven fabric gaskets on the shielded case on the main PWB.



State where the main PWB and shielded case are assembled



The following is a drawing mounting the main PWB Ass'y on the backlight chassis. (The parts indicated by -> are the access holes for confirmation.)
(Main PWB Ass'y => State where the shielded case and RF terminal angle are mounted on the main PWB)



[4] The way of detaching Rear Cabinet

- Here are the way of detaching Rear Cabinet. Please respond in following order.

1. Lay the TV set down on the desk or table with the glass side down, set the left hand between Front Cabinet and Rear Cabinet on the bottom of right corner side.

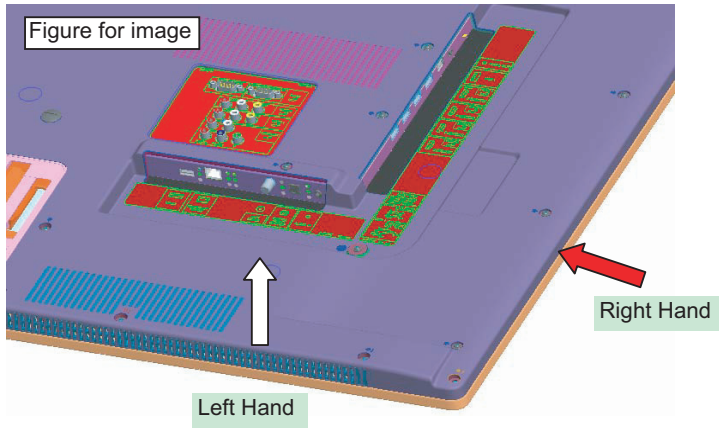


2. Set the right hand between Front Cabinet and Rear Cabinet on the right side in the under corner.



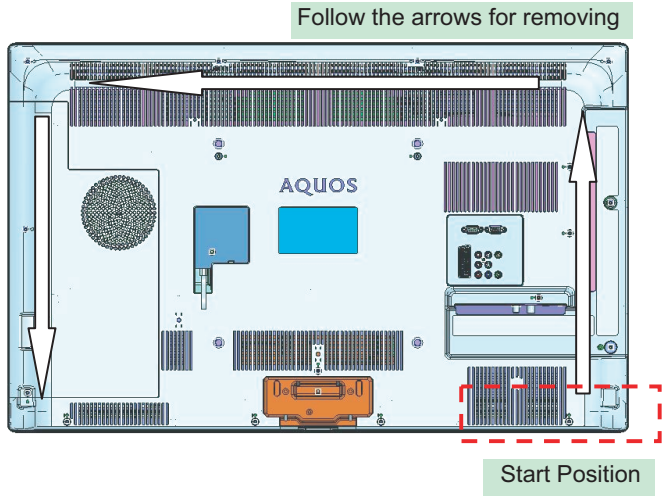
3. Push Rear Cabinet toward the center of TV set with right hand. At the same time, open Rear Cabinet in the back side with left hand and detach the hook.





4. Detach the hooks one by one in a counterclockwise direction with changing the position of right hand.





CHAPTER 5. ADJUSTMENT

[1] ADJUSTMENT PROCEDURE

1. Adjustment method after PWB and/or IC replacement due to repair

The unit is set to the optimum at the time of shipment from the factory.

If any value should become improper or any adjustment is necessary due to the part replacement, make an adjustment according to the following procedure.

1. Procure the following units in order to replace the main unit.

 MAIN UNIT: DKEYDF733FM55 (LC-60LE635E)

 MAIN UNIT: DKEYDF733FM56 (LC-60LE836E)

 MAIN UNIT: DKEYDF733FM57 (LC-60LE838E)

NOTE: [Caution when replacing IC (IC2001) in the main unit]

The above IC are Monitor microcomputer.

Before replacing the relevant part, procure the following parts in which the data have been rewritten.

IC2001	RH-iXD241WJNJQ	Monitor microcomputer

NOTE: [Caution when replacing ICs (IC8401, IC3303) in the main unit]

When replacing either IC8401 or IC3302, exchange MAIN units for DKEYDF733FM55 (LC-60LE635E), DKEYDF733FM56 (LC-60LE636E) DKEYDF733FM57 (LC-60LE638E).

Each part should not be individually exchanged.

IC8401	RH-iXD287WJQZQ	Flash
IC3303	RH-iXD220WJQZQ	Main CPU

NOTE: HDMI ROM Writing

After replacing IC1504, execute “HDMI EDID WRITE” on the page 5/20.

Please execute it after checking MODEL NAME & INCH SIZE. are correct.

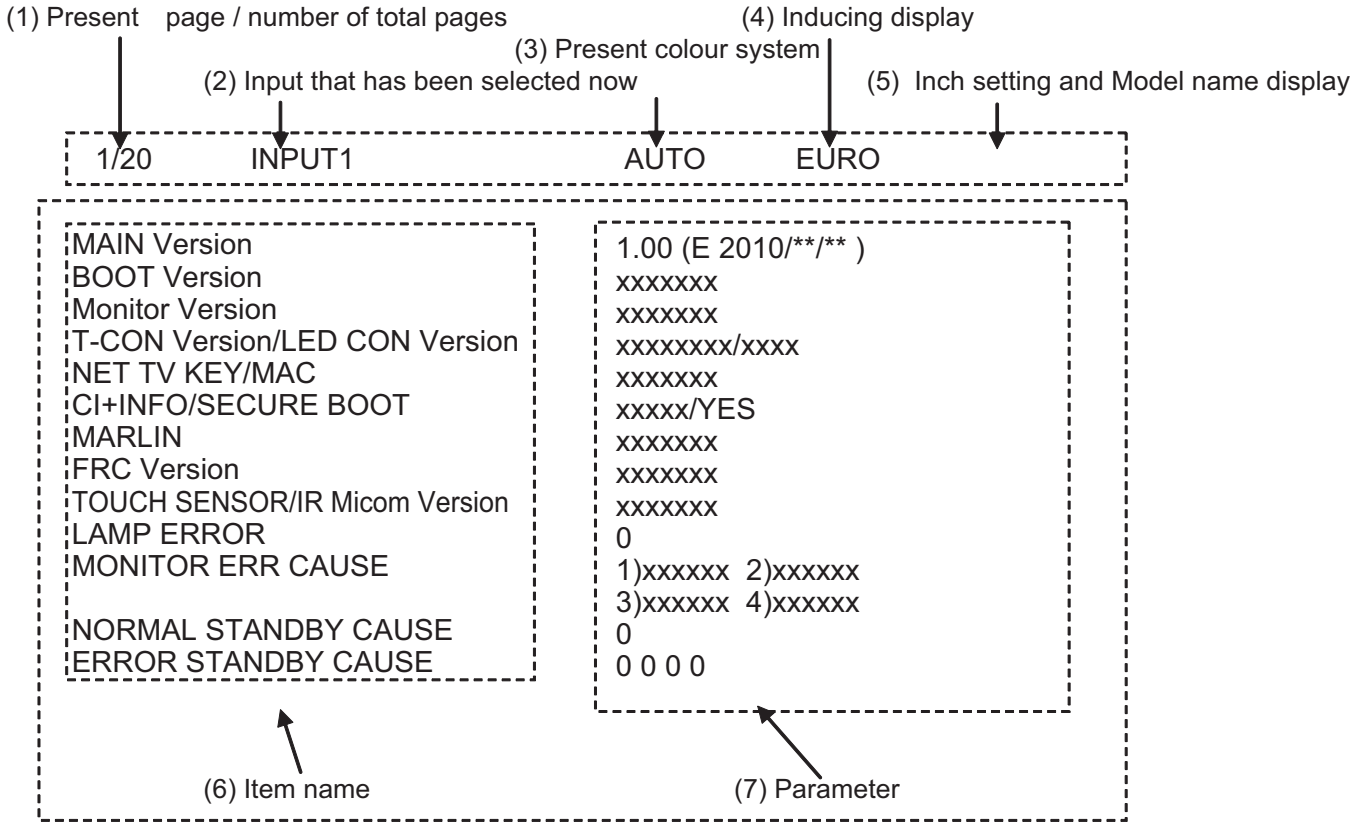
If MODEL NAME & INCH SIZE. are not correct, set them previously. (Refer to 2.)

The ROM data based on information of MODEL NAME & INCH SIZE.

1) Enter the process adjustment mode in TV.
2) Use the cursor keys (▲/▼) and CH keys (﹀/﹀) of R/C to select the item [HDMI EDID WRITE] on the page 5/20.
3) It is completed with OK displayed.

2. After replacing the LCD panel or LCD control/MAIN UNIT, check MODEL NAME in the following procedure.
 1) Enter the process adjustment mode in TV.
 2) Use the cursor keys (▲/▼) and CH keys (﹀/﹀) of R/C to select the item [MODEL NAME] on the page 20/20.
 3) Verify that the Model name is displayed.
 4) If the Model name doesn’t match, select the values of the Model name with the VOL keys (+/-).
 5) After selection in Step 4), press the OK key, and it is completed with OK displayed.
 6) Use the cursor keys (▲/▼) and CH keys (﹀/﹀) of R/C to select the item [PANEL_SIZE] on the page 20/20.
 7) Verify that the panel size is displayed.
 8) If the size doesn’t match, select the values of the panel size with the VOL keys (+/-).
 9) After selection in Step 8), press the OK key, and it is completed with OK displayed.
 10) After setting [MODEL NAME] [PANEL_SIZE], unplug the AC power cord and plug it back in.
3. After replacing the LCD panel or LCD control PWB, adjust the VCOM in the following procedure.
 1) Enter the process adjustment mode.
 2) Use the cursor keys (▲/▼) and CH keys (﹀/﹀) of R/C to select the item [VCOM ADJ] on the page 10/20.
 3) Press the OK key to verify that the adjustment pattern is displayed.
 4) Use VOL keys (+/-) of R/C to adjust the flicker in the center of the screen to minimum.
 5) When the optimal state is achieved in Step 4), press the OK key to turn the pattern to OFF.

2. Description of display



No.	Description	Display specification
(1)	Present page/number of total pages	2char/2char Decimal Number mark.
(2)	Input that has been selected now	TUNER/DTV/INPUT1/INPUT2/INPUT3/INPUT5/INPUT6/INPUT7/etc. ···
(3)	Present colour system	AUTO/N358/N443/PAL/SECAM/480i/580i/1080i/50 etc. ···
(4)	Inducing display	EUROPE/RUSSIA/SWEDEN
(5)	Inch setting and Model name display	Inch setting and Model name display
(6)	Item name	Max. 30 char
(7)	Parameter	Max. 60 char

3. List of adjustment process mode menu

The character string in brackets [] will appear as a page title in the adjustment process menu header.

Page	Line	Item	Description	Remarks (adjustment detail, etc.)
1/20		[INFO]		
	1	MAIN Version	1xxx(xxxxx)	Main software version
	2	BOOT Version	xxxxxxx	BOOT Version.
	3	Monitor Version	xxxxxxx	Monitor software version
	4	T-CON Version/LED CON Version	xxxxxxxx/xxxx	T-CON/LED CON Version
	5	NET TV KEY / MAC	xxxxxxx	NET TV KEY / MAC Address
	6	CI+INFO/SECURE BOOT	xxxxx/YES	CI+ Key Information/SECURE BOOT
	7	MARLIN	xxxxxxx	
	8	FRC Version	xxxxxxx	
	9	LAMP ERROR	0	Number of termination due to lamp error.
	10	MONITOR ERR CAUSE	1)xxxxxx 2)xxxxxx 3)xxxxxx 4)xxxxxx	Last error standby cause.
	11	NORMAL STANDBY CAUSE	0	Situation that became standby at the end. (Excluding the error)
	12	ERROR STANDBY CAUSE	0 0 0 0	Error standby cause
2/20		[INIT]		
	1	INDUSTRY INIT	Enter	Initialization to factory settings execution.
	2	INDUSTRY INIT(-Public)	OFF	Initialization to factory settings execution.(Public mode is excluded)
	3	PUBLIC MODE	OFF	Public mode ON/OFF setting
	4	Center Acutime	-	Main operating hours.
	5	RESET	OFF	Main operating hours reset.
	6	Backlight Acutime	-	Backlight operating hours.
	7	RESET	OFF	Backlight operating hours reset.
	8	LAMP ERROR RESET	OFF	Lamp error reset.
	9	ADJ PARAM SET	Enter	ADJ PARAM SET
	10	VIC XPOS	0	X-coordinate setting for VIC READ
	11	VIC YPOS	0	Y-coordinate setting for VIC READ
	12	VIC SIGNAL TYPE	MAIN	Signal type setting for VIC READ
	13	VIC READ	OFF	Picture level acquisition function (Level appears in green on the upper right)
3/20		[TUNER ADJ]		
	1	TUNER ADJ	Enter	TUNER auto adjustment execution
	2	PAL+TUNER ADJ	Enter	PAL TUNER auto adjustment execution
	3	TUNER ADJ(SMPTE)	Enter	TUNER auto adjustment execution (SMPTE)
	4	PAL+TUNER ADJ(SMPTE)	Enter	PAL TUNER auto adjustment execution (SMPTE)
	5	TUNER ADJ(SMPTE CH57)	Enter	TUNER auto adjustment execution (SMPTE CH57)
	6	PAL+TUNER ADJ(SMPTE CH57)	Enter	PAL TUNER auto adjustment execution (SMPTE CH57)
	7	TUNER CONTRAST A_GAIN	14	TUNER signal level adjustment
	8	TUNER CONTRAST D_GAIN	2048	TUNER signal level adjustment
	9	TUNER CONTRAST OFFSET	256	TUNER signal level adjustment
4/20		[PAL MAIN]		
	1	PAL ADJ	Enter	PAL adjustment
	2	SECAM ADJ	Enter	SECAM adjustment
	3	N358 ADJ	Enter	N358 adjustment
	4	PAL CONTRAST A_GAIN	14	PAL contrast adjustment
	5	PAL CONTRAST D_GAIN	2048	PAL contrast adjustment
	6	PAL CONTRAST OFFSET	256	PAL contrast adjustment
	7	SECAM CONTRAST A_GAIN	14	SECAM contrast adjustment
	8	SECAM CONTRAST D_GAIN	2048	SECAM contrast adjustment
	9	SECAM CONTRAST OFFSET	256	SECAM contrast adjustment
	10	N358 CONTRAST A_GAIN	14	N358 contrast adjustment
	11	N358 CONTRAST D_GAIN	2048	N358 contrast adjustment
	12	N358 CONTRAST OFFSET	256	N358 contrast adjustment
5/20		[CEC TEST]		
	1	HDMI CEC TEST	Enter	HDMI CEC test
	2	HDMI EDID WRITE	Enter	HDMI EDID WRITING
	3	INSPECT USB TERM	Enter	Reading inspection of USB memory terminal
	4	MONIDATA READ[TEMP/OPC]	OFF	MONITOR Temperature/ OPC Acquisition tool.
	5	SD CARD TEST	Enter	SD CARD TEST
	6	CAUSE RESET	Enter	Reset of standby cause

6/20		[COMP15KMAIN]		
	1	COMP15K ALL ADJ	Enter	Component 15K picture level adjustment
	2	COMP15K MAIN Y GAIN	140	Y GAIN adjustment value
	3	COMP15K MAIN CB GAIN	150	Cb GAIN adjustment value
	4	COMP15K MAIN CR GAIN	150	Cr GAIN adjustment value
	5	COMP15K Y OFFSET	64	Y OFFSET adjustment value
	6	COMP15K CB OFFSET	128	Cb OFFSET adjustment value
	7	COMP15K CR OFFSET	128	Cr OFFSET adjustment value
7/20		[HDTV]		
	1	HDTV ADJ	Enter	HDTV video level adjustment
	2	HDTV Y GAIN	140	HDTV Y GAIN adjustment value
	3	HDTV CB GAIN	150	HDTV Cb adjustment value
	4	HDTV CR GAIN	150	HDTV Cr adjustment value
	5	HDTV Y OFFSET	64	HDTV Y OFFSET adjustment value
	6	HDTV CB OFFSET	128	HDTV Cb OFFSET adjustment value
	7	HDTV CR OFFSET	128	HDTV Cr OFFSET adjustment value
8/20		[ANALOG PC]		
	1	ANALOG PC ADJ	Enter	DVI ANALOG video level adjustment
	2	R OFFSET	64	R CUTOFF adjustment value
	3	G OFFSET	64	G CUTOFF adjustment value
	4	B OFFSET	64	B CUTOFF adjustment value
	5	R GAIN	44	R DRIVE adjustment value
	6	G GAIN	44	G DRIVE adjustment value
	7	B GAIN	44	B DRIVE adjustment value
9/20		[SCART]		
	1	SCART RGB ADJ	Enter	SCART RGB level adjustment
	2	SCART RGB ADJ (FASTSW)	Enter	SCART RGB ADJ (FASTSW) adjustment
	3	SCART R CUTOFF	64	SCART R CUTOFF adjustment value
	4	SCART G CUTOFF	64	SCART G CUTOFF adjustment value
	5	SCART B CUTOFF	64	SCART B CUTOFF adjustment value
	6	SCART R GAIN	44	SCART R GAIN adjustment value
	7	SCART G GAIN	44	SCART G GAIN adjustment value
	8	SCART B GAIN	44	SCART B GAIN adjustment value
10/20		[LUMAADJ]		
	1	VCOM ADJ	64	Common bias adjustment (2D)
11/20		[LEV]		
	1	R GAIN (LO)	0	R DRIVE adjustment value
	2	G GAIN (LO)	0	G DRIVE adjustment value
	3	B GAIN (LO)	0	B DRIVE adjustment value
	4	R GAIN (HI)	0	R DRIVE adjustment value
	5	G GAIN (HI)	0	G DRIVE adjustment value
	6	B GAIN (HI)	0	B DRIVE adjustment value
12/20		[M EEP SET]		
	1	MONITOR TIME OUT	ON	Monitor and the main communication time-out setting
	2	MONITOR MAX TEMP	59	MONITOR MAX temperature setting
	3	MONITOR EEP READ / WRITE	WRITE	MONITOR EEPROM READ/WRITE Setting/execution
	4	MONITOR EEP ADR	0x 0	MONITOR EEPROM arbitrary addressing
	5	MONITOR EEP DATA	0x 0	MONITOR EEPROM arbitrary data specification
13/20		[M TEST PATTERN]		
	1	LCD TEST PATTERN		Pattern with built-in LCD controller display
	2	LCD TEST PATTERN1	NOT SUPPORT	
	3	LCD TEST PATTERN2	OFF	
	4	LCD TEST PATTERN3	NOT SUPPORT	
	5	LCD TEST PATTERN4	NOT SUPPORT	
14/20				
	1	TCON Version EXT.1	xxxxx	
	2	TCON Version EXT.2		
	3	TCON Version EXT.3		
	4	TCON Version EXT.4		

15/20		[FR REGI]		
	1	CROSSTALK ADJ MODE	Enter	
	2	CROSSTALK TH1		
	3	CROSSTALK TH2		
	4	CROSSTALK TH3		
	5	CROSSTALK TH4		
	6	CROSSTALK GAIN1		
	7	CROSSTALK GAIN2		
	8	CROSSTALK GAIN3		
16/20				
	1	WIFI SSID 2.4GHz	xxxxx	
	2	WIFI SSID 5 GHz	xxxxx	
	3	WIFI RSSI 2.4GHz	xxxxx	
	4	WIFI RSSI 5 GHz	xxxxx	
	5	WIFI TIME 5 GHz	xxxxx	
	6	WIFI RSSI TEST	xxxxx	
	7	WIFI RSSI RESULT	xxxxx	
17/20				
	1	READ/WRITE	READ	Read/Write
	2	SLAVE/ADDRESS	SLAVE0	Slave address
	3	REGISTER ADDRESS	0x 0 0x 0	Register address
	4	WRITE DATA	0x 0 0x 0	Writing data
	5	READ DATA	0x 0 0x 0	Reading data
18/20				
	1	RF AGC BG	6	RF-AGC BG adjustment execution
	2	RF AGC DK	5	RF-AGC DKG adjustment execution
	3	RF AGC I	6	RF-AGC I adjustment execution
	4	RF AGC L/L'	4	RF-AGC L/L' adjustment execution
19/20		[ETC]		
	1	ERROR STANDBY CAUSE1	NO RECORD	ERROR STANDBY CAUSE
	2	ERROR STANDBY CAUSE2	NO RECORD	
	3	ERROR STANDBY CAUSE3	NO RECORD	
	4	ERROR STANDBY CAUSE4	NO RECORD	
	5	ERROR STANDBY CAUSE5	NO RECORD	
	6	STANDBY CAUSE RESET	OFF	Reset stand by cause.
20/20		[ETC]		
	1	EEP SAVE	OFF	Writing setting values to EEPROM.
	2	EEP RECOVER	OFF	Reading setting values from EEPROM.
	3	MONITOR ERROR CAUSE RESET	OFF	Reset of monitor error cause
	4	MODEL NAME	LE830E	MODEL NAME
	5	PANEL SIZE	46	Panel size setting.
	6	VERUP FLAG ENABLE	Enter	Verup Flag
	7	PANEL LIMIT	ON	PANEL LIMIT
	8	PANEL RANGE LIMIT	xxx	PANEL RANGE LIMIT
	9	SHORT CHECK MODE	Enter	Check LED Back light
	10	SHORT CHECK CURRENT	60	
	11	CURRENT SW	LOW	
	12	PRODUCT EEP ADR	0x 0	Don't touch when serving (for producer of factory)
	13	PRODUCT EEP DATA	0x 0	Don't touch when serving (for producer of factory)
	14	PRODUCT FACTORY	1	Don't touch when serving (for producer of factory)

4. Special features

1. NORMAL STANDBY CAUSE (Page 1/20)

 Display of a cause (code) of the last standby.

 The cause of the last standby is recorded in EEPROM whenever it is possible.

 Checking this code will be useful in finding a problem when you repair the troubled set.

2. EEP SAVE (Page 24/20)

 Storage of EEP adjustment value.

3. EEP RECOVER (Page 20/20)

 Retrieval of EEP adjustment value from storage area.

4. MONITOR ERR CAUSE (Page 1/20)

Display of a cause (code) of Error from Monitor microcomputer.

The cause of Error is recorded in EEPROM whenever it is possible.

Checking this code will be useful in finding a problem when you repair the troubled set.

1) This displays Error code and time when the error occurred.

The latest error is displayed on “1)”.

The error that happens ahead of “1)” is displayed on “2)”.

2) The character depends on the way how to acquire Time Information.

T: Time is acquired from digital broadcasting
This doesn’t contain “Time offset” which is considered a time difference and Daylight-Saving Time, etc. ...

U: Time is acquired from analog broadcasting (teletext)

B: Accumulation time of Backlight
In the case that Time information cannot be acquired, “B” is displayed.

Example) In this example, it is shown that the error occurred 3 times.

1) 16 T07/01/01 12:03 Error code: 16 (lamp error) Time: 07/01/01 12:03
* It is latest Error.
* Time is acquired from digital broadcasting.
* Time is UTC which doesn't have Time offset.

2) 16 U01/01/01 04:07 Error code: 16 (lamp error) Time: 07/01/01 04:07
* It is Error that happens ahead of “1)”.
* Time is acquired from analogue broadcasting.

3) 16 B00000004:11 Error code: 16 (lamp error) Accumulation time: It is displayed that 4:11 have passed after Backlight driving.
* It is Error that happens ahead of “2)”.

4) 00 0000000000000 No error (“00” shows that the error is not occurred.)

5. Lamp Error detection

1. Function

This LCD color TV set incorporates a Lamp error detection feature that automatically turns off the power for safety under abnormal lamp or lamp circuit conditions. If by any chance anything is wrong with the lamp or lamp circuit or if the lamp error detection feature is activated for some reason, the following will result.

1) The power is interrupted in about 500ms after it is turned on.
 (A central icon on the front of the TV flash on and off.: ON for 400ms and OFF for 1600ms.)
2) If the above phenomenon 1) occurs 5 times, it becomes impossible to turn on the power.
 (A central icon keep flashing on/off.)

2. Measures

1) Set the lamp error detection to OFF

Enter the adjustment process mode, referring to “2. Entering and exiting the adjustment process mode”.

The adjustment process mode can ignore “5 times count”, so If the above phenomenon 1) occurs 1~4 times, the lamp will go out.

If Lamp Error detection pin [4pin of PD: P9602/19pin of IC2001] is “High” by a trouble with the lamp and lamp circuit, it can boot-up by the adjustment process mode.

Please execute **“Lamp Error detection off-mode”**.

Unplug the AC power cord of running TV set to force off the power.

While holding down the “VOL (-)” and “CH (∧)” keys on the set at once, touch the power supply key on the set.

After a central icon flash off, separate the fingers from key on the set.

Then, you can check the operation to see if the lamp and lamp circuit are in trouble.

If you fail boot-up, retry the procedure.

2) Resetting the lamp error count

After the lamp and lamp circuit are improved from a trouble, reset the lamp error count.

(Because the power cannot be turned on, if a lamp error is detected 5 consecutive times.)

a) Enter the adjustment process mode, referring to “4. Entering and exiting the adjustment process mode”.

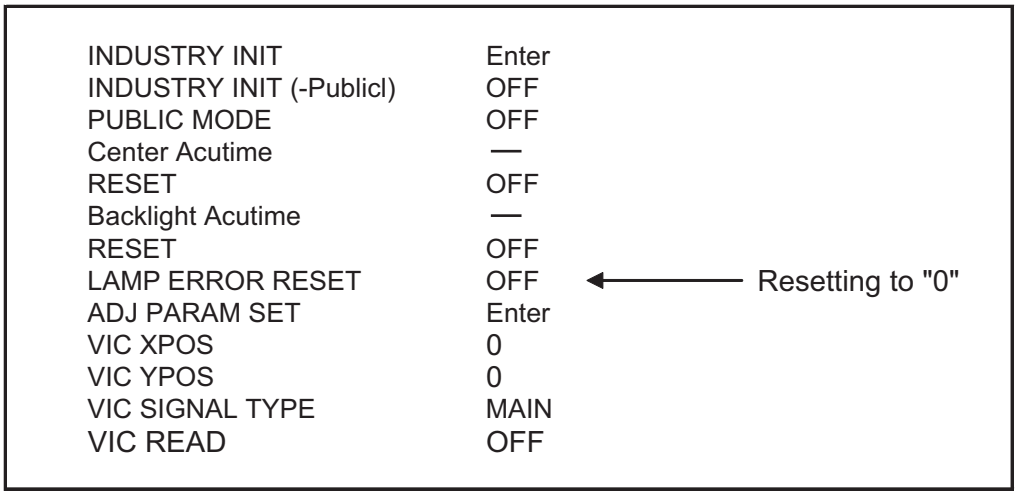
b) Using the cursor (▲/▼) key, move to the cursor to [LAMP ERROR RESET], Line 8 on adjustment process mode service page 2/20.

c) With the cursor (◄/►) keys, select the [LAMP ERROR RESET] value.

Finally press the cursor (OK)., the count is reset.

Check LAMP ERROR Count on adjustment process mode Page 2/20.

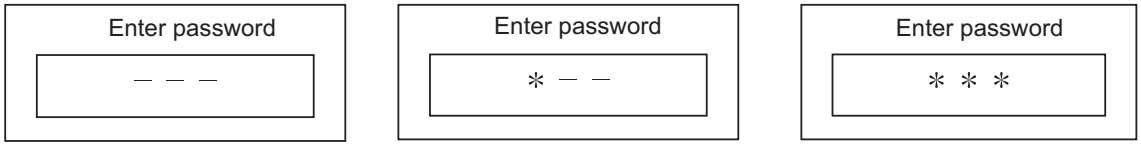
Table of contents of adjustment process mode Page 2/20



6. Public Mode

1. Starting the Public Mode
 - There are two following ways to display the PUBLIC Mode setting screen.

 1) Turn off the power, and turn it on again, pressing the "CHANNEL UP" and "Volume UP" keys of the main unit at the same time.
 Please separate the finger from the power supply key when boot-up is confirmed with lighting of a central icon etc.
 After a while, value of Enter password appears on the screen.
 a) Turn off the power, refer to "3. Method of shuts down for Power supply".
 b) While holding down the "INPUT" and "Volume (+)" keys on the set at once, touch the power supply key on the set.
 Please separate the finger from the power supply key when boot-up is confirmed with lighting of a central icon etc.
 After a while, value of Enter password appears on the screen.
 c) Display the Pass Word input screen.



 Operation procedure
 - The initial input position is the digit at the left end.
 - For the numeric keys "0" to "9" of R/C, key input is accepted.
 Input of the other keys is prohibited.
 - Change "—" to "✻" by inputting the numeric key at the input position, and shift the input position rightward one digit.
 - When three digits are completely input, the Pass Word is judged.

 d) Check the Pass Word by inputting three digits.
 If the Pass Word "0" "2" "7", it shifts to the PUBLIC Mode setting screen.
 In another case, the screen is erased, and it operates in the ordinary mode.

2. Exiting the Public Mode Setting screen
 - There are two following ways to exit the Public Mode setting screen.

 1) Turn off the power.
 2) Select "Execution" in the PUBLIC_Mode to execute it.
 Activate the restart under the set content.
 Here, the START input SOURCE setting is excluded since this item is referred to only when the power is turned on.

3. Set value of the Public Mode
 - When the shipment setting is done, a set each value in Public Mode is initialized.
 (PUBLIC MODE in the process mode Setting of a flag is also initialized)
 - Separately, the shipment beginnings when all except for each set value in Public Mode is initialized are provided for a process mode.
 (INDUSTRY INIT (-Public))
 - Only when turning on the PUBLIC MODE item, each setting is effective.
 - After it decides it with EXECUTE, it AC OFF/ON it to reflect a set value.

4. Basic operation in the Public Mode

Vol (+/-) or Cursor (◄/►)	Change or execution of the set value.
CH (+/-) or Cursor (▲/▼)	Movement to the selected item.
Decision (ok)	Excution (Used by the items "Execution" and "RESET".)

Public Mode setting screen.

Public Mode	
POWER ON FIXED	[VARIABLE]
SHUT DOWN MODE	[NORMAL]
MAXIMUM VOLUME	[60]
VOLUME FIXED	[VARIABLE]
VOLUME FIXED LEVEL	[20]
RC BUTTON	[RESPOND]
PANEL BUTTON	[RESPOND]
MENU BUTTON	[RESPOND]
AV POSITION FIXED	[VARIABLE]
ON SCREEN DISPLAY	[YES]
INPUT MODE START	[NORMAL]
INPUT MODE FIXED	[VARIABLE]
LOUD SPEAKER	[ON]
RC PATH THROUGH	[OFF]
232C POWON	[DISABLE]
PUBLIC MODE	[ON]
RESET	
EXECUTE	

5. Operation after “RESET”

Select “RESET” in the PUBLIC Mode, and it operates as follows when it is executed (refer to the basic operation).

- The set contents in the PUBLIC mode are initialized.
- It does not exit the PUBLIC mode.
- If “EXCUTE” is not executed, the content that does RESET is not reflected.

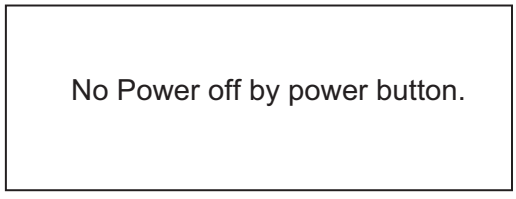
6. Setting items. (* Item names and selective items are expressed in English.)

1) Power ON fixed [POWER ON FIXED]

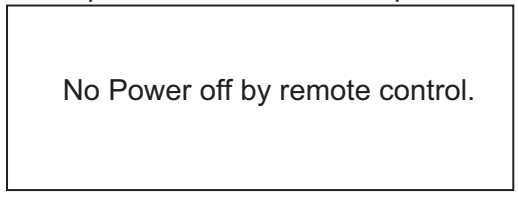
Option	“VARIABLE”, “FIXED_ALL”, “FIXED_BODYKEY” or “RCRESPOND” (loop enabled)
Default	“VARIABLE”
Function	• VARIABLE : “POWER/RECEPTION” key on TV unit or remote control is enabled. • FIXED_ALL : “POWER/RECEPTION” key on TV unit or remote control is disabled. • FIXED_BODYKEY : Only the “MAIN POWER” key on TV unit is disabled (The remote control is enabled). • RC RESPOND : The main unit’s POWER switch toggles between ON and Standby (the same operation by the remote control).
Key disabled when set other than default	• OFF TIMER (SLEEP) (*Only when setting to FIXED_ALL)
Remarks	• When selecting to “FIXED_ALL”, function related standby factors (see below) doesn’t work. and not selecting. OFF TIMER (Sleep) No operation OFF No signal OFF (including the power management) * These items does not exist according to the model.

If the power button is pressed in the ordinary mode in setting to “FIXED_ALL” and “FIXED_BODYKEY”, the caution is displayed for 5 seconds.

When power button on the main unit is pressed



When power button on R/C is pressed



* The OSD display is an example.

If another ODS is previously displayed, the status is reset (MENU or similar).

2) Instantaneous current shutdown setting in turning off the power [SHUT DOWN MODE]

Option	“NORMAL” or “QUICK”
Default	NORMAL
Function	• This function decides whether scanning digital tuner is enabled or disabled when the power is standby.
	NORMAL : Scanning digital tuner is enabled when the power is standby. QUICK : Scanning digital tuner is disable. It is possible to put into the standby state instantaneously due to power off input, when the power is standby. Immediately, state is a complete standby.

Remarks	In selecting “QUICK”, the function does not work for the following items. (selection impossible.) • ON TIMER, QUICK START, DIGITAL FIXED, etc. * These items does not exist according to the model.

3) Volume maximum level [MAXIMUM VOLUME]

Option	0~60 (loop disabled)
Default	60
Function	The volume cannot be increased more than the adjusted value (the main unit’s speaker only).
Remarks	• When setting to 59 or less, only the figure is displayed in the normal mode; the volume bar is not displayed. • The volume of the headphones is limited. • The setting is impossible when VOLUME FIXED is set to FIXED.

4) Volume fixed [VOLUME FIXED]

Option	“VARIABLE”, “FIXED”, “ACCTRL” or “AC/RCCTRL” (loop enabled)
Default	“VARIABLE”
Function	• VARIABLE : The volume is not fixed. • FIXED : The volume is fixed to the value adjusted in the volume fixed level. • AC CTRL : The unit starts at the volume specified in the volume fixed level, when power is turned on in the case of the AC-ON only. • AC/RC CTRL : The unit starts at the volume specified in the volume fixed level, when power is turned on in any case. (AC→ON, remote control→ON, main utit's key→ON)
Exception	• In the adjustment process, the volume can be set to any level regardless of this setting.
Disabled key when setting to FIXED	• VOLUME UP/DOWN [both remote control and main unit] • MUTE * Main units's key is enabled for operating menu.
Remarks	• [MAXIMUM VOLUME] has priority to [VOLUME FIXED] * When setting to FIXED, Maximum volume is fixed. • The volume of the headphones is fixed. • When setting to “FIXED”, the volume is not displayed in operating Disabled key. • In menu operation, the main unit’s keys (Vol (+/-)) are enabled. • Volume level graphic be omitted to volume level number. • In setting to FIXED, ONVOL of On TIMER is not selected (Eliminate Item) • In setting to AC/RC CTRL, ONVOL of On TIMER i is not selected (Eliminate Item)

5) Volume fixed level [VOLUME FIXED LEVEL]

Option	0~60 (loop disabled)
Default	20
Function	The volume is fixed to the adjusted value (the main unit’s speaker only).
Exception	• In the adjustment process, the volume can be set to any level regardless of this setting.
Remarks	• When [VOLUME FIXED] is set to “VARIABLE”, the setting cannot be changed. • VOLUME can be abbreviated to VOL.

6) Remote control operation [RC BUTTON]

Option	“RESPOND”, “NORESPOND” or “LIMITED” (loop enabled)
Default	“RESPOND”
Function	The operation of the remote control’s keys is set. RESPOND : The remote control’s keys in the normal state are enabled. NO RESPOND : The remote control’s keys in the normal state are disabled. The POWER key (RECEPTION/STANDBY key) is also disabled. LIMITED : Only a part of keys (CHANNEL, etc.) is enabled and other keys are disabled.
Exception	• All the keys are enabled regardless of this setting while entering the adjustment process mode, inspection mode or Public Mode setting screen.
Remarks	The enable keys when setting to “LIMITED” are depended on Model.

7) Main Unit Operation [PANEL BUTTON]

Option	“RESPOND” or “NO RESPOND” (loop enabled)
Default	“RESPOND”
Function	• RESPOND : The main unit’s keys are enabled. • NO RESPOND : The main unit’s keys are disabled excluding the POWER key (RECEPTION/STANDBY key).

Exception	• The start operation in the adjustment process mode, inspection mode are enabled regardless of this setting. • All the keys are enabled regardless of this setting while entering the adjustment process mode, inspection mode or Public Mode setting screen. • For the models with the MENU key on the main unit, menu operation is possible regardless of the setting during the initial setting when the power is turned on for the first time.

8) Menu operation [MENU BUTTON]

Option	“RESPOND” or “NO RESPOND” (loop enabled)
Default	“RESPOND”
Function	The MENU key on the main unit and remote control is decided whether it is enabled or disabled.
Exception	• RESPOND : The manu key is enabled. • NO RESPOND : The manu key is disabled. : All the keys are enabled regardless of this setting while entering the process mode, inspection mode or Public Mode setting screen.
Disabled key excluding Menu key when setting to not default	All the direct transition keys to menu display. (AUTO PRESET, MANUAL MEMORY and others) * These keys does not exist according to the model.
Remarks	When setting to “NO RESPOND” • For the models with the MENU key on the main unit, menu operation is possible regardless of the setting while the initial setting when the power is turned on for the first time.

9) AV position fixed [AV POSITION FIXED]

Option	“VARIABLE” or “FIXED” (loop enabled)
Default	“VARIABLE”
Function	• VARIABLE : AV position is not fixed. • FIXED : AV position is fixed. : The image/sound adjustment items in the menu are fixed in the selected state. : When receiving “AV POSITION” of the remote control, only the actual state is displayed, and setting is not changed.
Remarks	• When receiving the sound select direct keys (AV POSITION key, OPC, DOLBY key, etc.), only the actual state is displayed; no setting is changed. * These keys does not exist according to the model. • The settings for the Public mode are retained after the personal data is initialized, each item for the AV position and image/sound adjustment are not initialized.

10) OSD display [ON SCREEN DISPLAY]

Option	“YES”, “NO” or “LIMITED” (loop enabled) “LIMITED” is looped only in case of need (destination).
Default	“YES”
Function	• YES : OSD is displayed. • NO : The following OSD is not displayed. Registration, setting, adjustment menu, channel call, volume bar, and input select. • LIMITED : Only a part of OSD (CH call: “New Information” etc...) is not displayed.
Key which may be enabled (Example of the confusing key)	• It is OK in the case that simple input select occur or the original state returns soon automatically.
Disabled key when setting to not default	• When setting to “NO”, the keys which is related to visibility of the screen and sound cannot be used. STILL IMAGE, SCREEN DISPLAY, OFF TIMER, AV POSITION, BRIGHTNESS SENSOR, SCREEN SIZE SELECT, AUTO PRESET, MANUAL MEMORY, IMAGE SELECT, SOUND SELECT, LANGUAGE, Closed caution * Disabled keys dependeds on the models.
Remarks	• When setting to “NO”, ON TIMER (Watching reservation) is cleared. OFF TIMER “SLEEP” is cleared. * These items does not exist according to the model. • When setting to “NO”, These Displays (Version-up, Public mode setting screen, Pass Word input screen of Public Mode, the adjustment process mode, K mark of inspection mode) are enabled regardless of this setting.

11) Start mode [INPUT MODE START]

Option	“NORMAL” or “Input source 1 (input selection or channel)” ... (loop enabled)
Default	“NORMAL”
Function	Which kinds of input source or channel is decided when the power turning on. NORMAL : The content of the last memory is followed.
Remarks	• When setting to not Normal, ON TIMER (Watching reservation) has priority. • When setting to “NORMAL”, [INPUT MODE FIXED] is set to “VARIABLE” and [INPUT MODE FIXED] is prohibited to select. (selection impossible.)

Example of option: “NORMAL”, “TVD (002TV)”, “INPUT1”, “INPUT2”, “INPUT3”, “HDMI1”, “HDMI2”, “HDMI3”, “HDMI4”.

12) Input fixed [INPUT MODE FIXED]

Option	“VARIABLE”, “FIXED”, “ACCTRL” or “AC/RCCTRL” (loop enabled)
Default	VARIABLE
Function	VARIABLE : If [INPUT MODE START] is set to Normal, input mode is not fixed. FIXED : When “INPUT MODESTART” is active, it is impossible to switch to another channel or input source. AC CTRL : When “INPUT MODESTART” is active the unit starts at the input mode which is selected when power is turned on in the case of the AC-ON only. AC/RC CTRL : When “INPUT MODESTART” is active the unit starts at the input mode which is selected when power is turned on in any case. (AC→ON, remote control→ON, main utit's key→ON)
Disabled key when setting to “FIXED”	CHANNEL (+/-), DIRECT CHANNEL buttons, FLASHBACK, INPUT SELECT, TV/VIDEO, AUTO PRESET, MANUAL MEMORY, i.LINK, DIRECTINPUTSELECT, ATV, DTV, EPG, RADIO etc...
Remarks	• If [INPUT MODE START] is Normal, this function cannot be set. Set to “VARIABLE” automatically. • When setting to “FIXED”, The item related to the channel setting and input selection in Menu are not displayed. ON TIMER (Watching reservation) is not active. * These items does not exist according to the model.

13) Speaker ON/OFF selection [LOUD SPEAKER]

Option	“ON” or “OFF” (loop enabled)
Default	ON
Function	ON : The sound from the speakers is output. OFF : The sound from the speakers is not output even if the headphones are not used.
Remarks	• When the VOL (+/-) key is pressed, the mute icon is displayed for 4 seconds. • For the MUTE key and sound-related keys, caution is displayed. • For the headphones, normal operation is possible.

14) Remote control path through [RC PATH THROUGH]

Option	“OFF”, “ON: TVRCE” or “ON: TVRCD” (loop enabled)
Default	OFF
Function	The item decide whether the signal received by the remote control’s light-receiving section is output to the blankpin (9pin) of RS232C. OFF : This function is not active. ON: TVRCE : This function is active, and remote control is active, too. ON: TVRCD : This function is active, but remote control is not active.
Exception	• In the case of “ON: TV RCD”, the start operation in the adjustment process mode, inspection mod are enabled regardless of this setting. • In the case of “ON: TV RCD”, all the keys are enabled regardless of this setting while entering the adjustment process mode, inspection mode or Public mode setting screen.
Remarks	* Remote control path through does not exist according to the model.

15) 232C power ON control [232C POWON]

Option	“ENABLE” or “DISABLE” (loop enabled)
Default	DISABLE
Function	The item decide whether Power ON by the 232C command is enabled/disabled in the standby state. The same function as 232C command “RSPW”. ENABLE : POWR0001 is always enabled. DISABLE : Start-up may be impossible at POWR0001. (If the 232C command reception module is set to OFF, the command is invalid.)

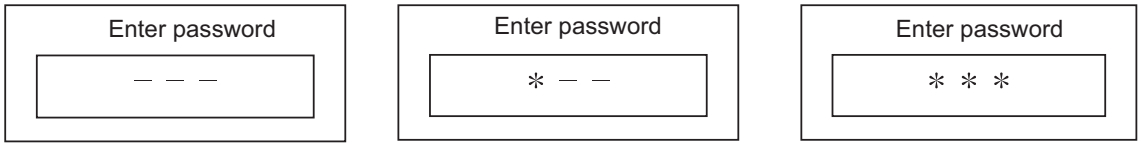
16) Public mode setting [PUBLIC MODE]

Option	“OFF” or “ON” (loop enabled)
Default	OFF
Function	The item decide whether Public mode setting menu are enabled or disabled. The same item as [PUBLIC MODE] in the adjustment process menu. OFF : Public mode is not active. ON : Public mode is active.
Remarks	Each operation of the Public mode is impossible unless this item is set to ON.

7. Copy Mode

1. Starting the Copy Mode
 - There are two following ways to display the Copy Mode setting screen.

 1) Method of needing password
 a) Turn off the power, and turn it on again, pressing the “CHANNEL UP” and “Volume UP” keys of the main unit at the same time.
 Please separate the finger from the power supply key when boot-up is confirmed with lighting of a central icon etc.
 After a while, value of Enter password appears on the screen.
 b) Display the Pass Word input screen.



 Operation procedure
 - The initial input position is the digit at the left end.
 - For the numeric keys “0” to “9” of R/C, key input is accepted.
 Input of the other keys is prohibited.
 - Change “—” to “✻” by inputting the numeric key at the input position, and shift the input position rightward one digit.
 - When three digits are completely input, the Pass Word is judged.

 c) Check the Pass Word by inputting three digits.
 If the Pass Word “3” “6” “9”, it shifts to the Copy Mode setting screen.
 In another case, the screen is erased, and it operates in the ordinary mode.

2. Exiting the Copy Mode Setting screen
 There is following way to exit the Copy Mode setting screen.
 - Turn off the power. (Unplug the AC power cord from the outlet to forcibly turn off the power.)

3. Basic operation in the Copy Mode

CH (+/-) or Cursor (▲/▼)	Movement to the selected item.
Decision (ok)	Execution

4. Restriction of Copy Mode

- USB thumb drive should be more than 1Mbyte.
- File system of USB thumb drive should be FAT (FAT32).
- More than one USB thumb drive shouldn't be connected to TV.
- All USB terminals can be valid, but more than one USB thumb drive shouldn't be connected to TV.
- If USB device is detected by TV, focus is not appropriated to items.
- In Copy mode (TV→USB) and (USB→TV), following should be mutched.

 Vender Name (Fixed)

 Key Information (Fixed)

 USB Cline Version

 Inch Size

 Country setting (Factory initialization)

 Model Name

 Software Version
- In each TV, setup of Network and IP control should be set again.

NOTE: • It is unnecessary to execute “Initial Auto Instration” for Copy Mode.
(Obviously, setting the country is also unnecessary.)
• Copy Mode can’t start until the TV recognizes a USB device.
TV takes about 20 seconds to recognizes a USB device after boot-up.

5. Copy data

Copy data is as follows;

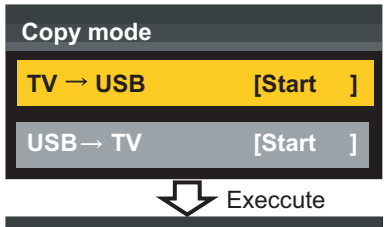
Copy Data	Remarks
Size of Ch call	
Card slot selection Setting	
Alphabet sorts do/not	
HOME/Store Setting	
Public Setting	
Sound multiplex information in each Ch	
Administrative information for Time Shift	Vendor ID, Product ID, Serial ID for storage
Communication's information	IP address, Gateway, DNS address Kinds of Security key encryption (WiFi) Access point identifier (WiFi) Key for access point
IP control setting information	Device name, Login ID, Password, Communication port
DTV service list	Number of all services CH list Number of broadcasting on each network
Last value	Last network information (DVB-T, DVB-S, DVB-C, ATV) Last channel information Volume, wide mode, and subtitle
Local Time Information	Information that corrects ±X time against Universal Time
User Manu Data	User Menu Data don't have these information. Temporary data Message list, Reception report, EPG, Off timer, Off video, and Signal strength Peculiarity data for TV DRM information for DivX, Mac address, and Accumulated time information Connected equipment information (But the recorder selection of the AQUOS LINK setting can be copied.) physical address Category of equipment Maker Name Connected model name Data related to encrypted broadcasting (CI+) Adjustment process mode Data

6. Operating

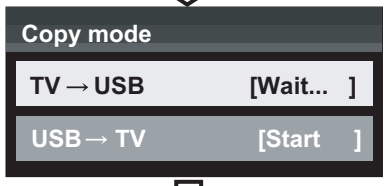
1) Copy mode (TV→USB))

① Execute start in Copy Mode setting screen.

※ If USB device is detected by TV,
focus is not appropriated to items.



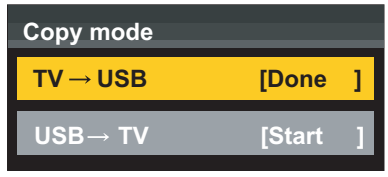
Execcute



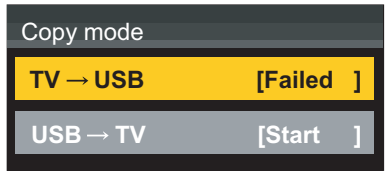
② [Wait···] is displayed while executing it.
When succeeding: Done is displayed.
When failing: Failed is displayed.

※ Key opration is not valid in coping.

Success



Fail

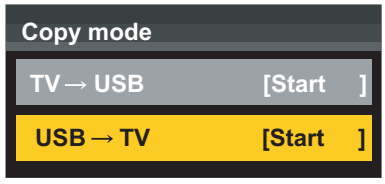


③ After success of copy,
unplug the AC power cord from the outlet, please.

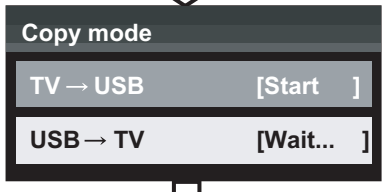
2) Copy mode (USB→TV))

① Execute start in Copy Mode setting screen.

※ If USB device is detected by TV,
focus is not appropriated to items.



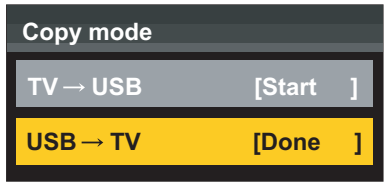
Execcute



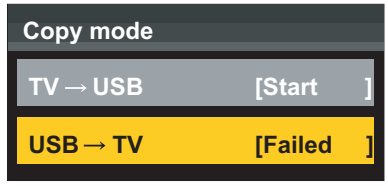
② [Wait···] is displayed while executing it.
When succeeding: Done is displayed
When failing: Failed is displayed.

※ Key opration is not valid in coping.

Success



Fail



③ After success of copy,
unplug the AC power cord from the outlet, please.

8. Video signal adjustment procedure

The adjustment process mode menu is listed in Section 5.

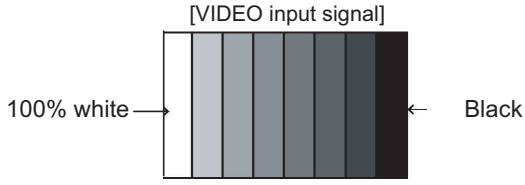
Signal generator level adjustment check. (Adjustment to the specified level)

- Composite signal PAL : 0.7Vp-p ± 0.02Vp-p (Pedestal to white level)
- 33K component signal (50 Hz) : Y level : 0.7Vp-p ± 0.02Vp-p (Pedestal to white level)
 : PB, PR level : 0.7Vp-p ± 0.02Vp-p
- ANALOG PC (RGB) signal : RGB level : 0.7Vp-p ± 0.02Vp-p

8.1. Entering the adjustment process mode

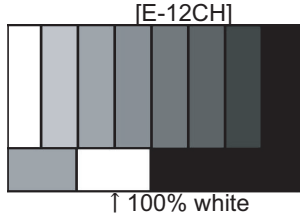
Enter the adjustment process mode according to Section **2**.

8.2. PAL signal adjustment

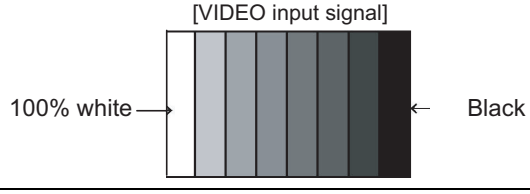
	Adjustment point	Adjustment conditions	Adjustment procedure
1	Setting	[Signal] PAL Full field colour bar composite signal [Terminal] EXT1 SCART Video (PAL) IN	• Feed the PAL full field colour bar signal (75% colour saturation) to EXT1 SCART IN. 
2	Auto adjustment performance	Adjustment process [PAL ADJ] page 4/20	Bring the cursor on [PAL ADJ] and press [OK]. [PAL ADJ OK] appears when finished.

* **ATTENTION:** Please execute [12.3. TUNER adjustment] afterwards if you adjust [12.2. PAL signal adjustment] after all adjustments are completed.

8.3. TUNER adjustment

	Adjustment point	Adjustment conditions	Adjustment procedure
1	Setting	[Signal] PAL sprit field colour Bar RF signal UV [Terminal] TUNER	• Feed the PAL Split Field colour bar signal (E-12ch) to TUNER. • Make sure the PAL colour bar pattern has the sync level of 7:3 with the picture level. Signal level: 55 dB μV ± 1dB (75Ω LOAD) 
2	Auto adjustment performance	Adjustment process [TUNER ADJ] page 3/24	Bring the cursor on [TUNER ADJ] and press [OK]. [TUNER ADJ OK] appears when finished.

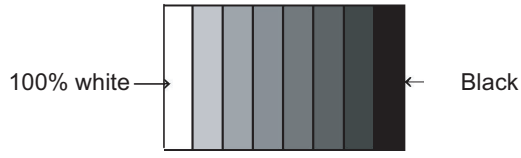
8.4. SECAM adjustment

	Adjustment point	Adjustment conditions	Adjustment procedure
1	Setting	[Signal] SECAM Full field colour Bar Signal [Terminal] EXT1 SCART IN	• Feed the SECAM full field colour bar signal (75% colour saturation) to EXT1 SCART IN. 
2	Auto adjustment performance	Adjustment process [SECAM ADJ] page 4/24	Bring the cursor on [SECAM ADJ] and press [OK]. [SECAM ADJ OK] appears when finished.

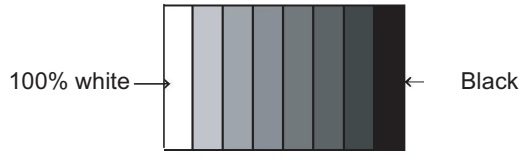
8.5. ADC adjustment (Component 15K)

	Adjustment point	Adjustment conditions	Adjustment procedure
1	Setting	[Signal] COMP15K, 50Hz 100% Full field colour bar Signal [Terminal] EXT3 COMPONENT IN	• Feed the COMPONENT 15K 100% full field colour bar signal (100% colour saturation) to EXT3 COMPONENT IN. 
2	Auto adjustment performance	Adjustment process [COMP15k ALL ADJ] page 6/24	Bring the cursor on [COMP15k ALL ADJ] and press [OK]. [COMP15K ALL ADJ OK] appears when finished.

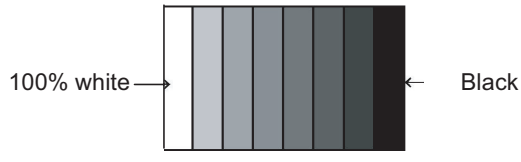
8.6. ADC adjustment (Component 33K)

	Adjustment point	Adjustment conditions	Adjustment procedure
1	Setting	[Signal] COMP33K, 50Hz 100% Full field colour bar Signal [Terminal] EXT3 COMPONENT IN	• Feed the COMPONENT 33K 100% full field colour bar signal (100% colour saturation) to EXT3 COMPONENT IN. 
2	Auto adjustment performance	Adjustment process [HDTV ADJ] page 7/20	Bring the cursor on [HDTV ADJ] and press [OK]. [HDTV ADJ OK] appears when finished.

8.7. PC signal adjustment (ANALOG D-Sub 15pin)

	Adjustment point	Adjustment conditions	Adjustment procedure
1	Setting	[Signal] XGA, 60Hz 100% Full Field Colour Bar Signal [Terminal] PC IN	• Feed the XGA 60Hz 100% full field colour bar signal (100% colour saturation) to PC IN. 
2	Auto adjustment performance	Adjustment process [ANALOG PC ADJ] menu page 8/20	Bring the cursor on [ANALOG PC ADJ] and press [OK]. [ANALOG PC ADJ OK] appears when finished.

8.8. RGB (SCART) adjustment (RGB 15K)

	Adjustment point	Adjustment conditions	Adjustment procedure
1	Setting	[Signal] RGB 15K, 50Hz 100% Full field colour bar signal [Terminal] EXT1 SCART RGB IN	• Feed the RGB 15k 50Hz 100% full field colour bar signal (100% colour saturation) to EXT1 SCART IN. 
2	Auto adjustment performance	Adjustment process [SCART RGB ADJ] menu page 9/20	Bring the cursor on [SCART RGB ADJ] and press [OK]. [SCART RGB ADJ OK] appears when finished.

9. White balance adjustment

For white balance adjustment, adjust the offset values on pages 11/20.

[Condition of the unit for inspection] : Modulated light (+16)
AV MODE: DYNAMIC
Active Backlight: OFF
OPC: OFF
Asing Time: Min, 60 minute

[Input signal condition] : HDMI 1080i 15IRE (LO), 78IRE (HI)

[Adjustment reference device] : Minolta CA-210

[Adjustment procedure]

1) Display the current adjustment status at R/G/B_GAIN (HI). (Page 11/20 of process adjustment)
 The signal of 78IRE is input.
2) Read the value of the luminance meter. x=0.272, y =0.277
3) Change R_GAIN (HI)/ B_GAIN (HI) (Adjustment offset value) on page 11/20 of process adjustment so that the values of the luminance meter approach x=0.272 and y =0.277.
 (Basically, G is not changed. If adjustment fails with R and B, change G. When G is lowered, the weaker of R or B must be fixed.)
4) Display the adjustment status of the current R/G/B_GAIN (LO).
 The signal of 15IRE is input.
 Change R_GAIN (LO)/ B_GAIN (LO) (adjustment offset value) on page 11/20 of process adjustment so that the values of the luminance meter approach x =0.272 and y = 0.277.
5) Both HI and LO are repeating the step from 1 to 4 until becoming an aim value.
 [Adjustment reference standard value]
 Adjustment spec ± 0.002 Inspection spec ± 0.004 (point LO)
 Adjustment spec ± 0.001 Inspection spec ± 0.002 (point HI)
6) After completing adjustments, set EEP SAVE (Page 20/20) to ON in the process menu to save the white balance adjustment value.

10. Confirmation item

1. HDMI-CEC Inspection
 After repairing the CEC function, check the operation about HDMI-CEC circuit.
2. CI card Inspection
 After repairing the CI function, check that the DTV signal is received by inserting CAM.
 And check the KEY certification by inserting CAM which is prepare for CI+.
3. LAN Inspection (NET)/test connectivity of SD card.
 After repairing the LAN function, check the communication by connecting PC and LAN terminal.
 And test connectivity of SD card.
4. 3D Check
5. IR communication Check/IR Emitter (Infrared light Output) Inspection.

11. Initialization to factory settings

CAUTION: When the factory settings have been made, all user setting data, including the channel settings, are initialized.
(The adjustments done in the adjustment process mode are not initialized.) Keep this in mind when initializing these settings.

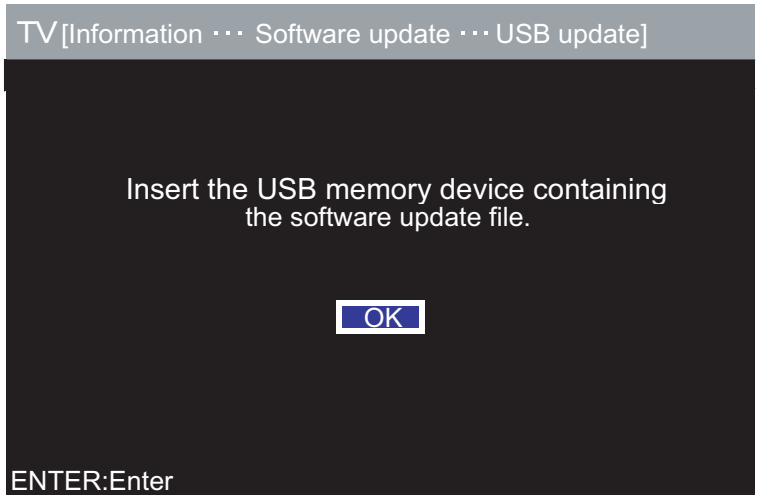
	Adjustment item	Adjustment conditions	Adjustment procedure
1	Factory settings	Ends by turning off the MAIN POWER key. (See to below caution)	[Factory setting with adjustment process mode] • Enter the adjustment process mode. • Move the cursor to [INDUSTRY INIT] on page 2/20. • Use the R/C key to select a region from [EUROPE/RUSSIA/SWEDEN] and press the [OK] key. • “EXECUTING” display appears. • After a while, “SUCCESS” display appears, the setting is completed. When succeeding: Background color (green) When failing: Background color (red)
			The following items are initialized in the factory setting. 1) User settings 2) Channel data (e.g. broadcast frequencies) 3) Maker option setting 4) Password data

After adjustments, exit the adjustment process mode.
To exit the adjustment process mode, unplug the AC power cord from the outlet to forcibly turn off the power.
When the power is turned off with the remote control, unplug the AC power cord and plug it back in (wait approximately 20 seconds before plugging in the AC power cord).
After completing the NET connection., execute the NET initialization (Record of the server access).

Please execute the initialized in the factory setting again when you turn on the power supply after the initialized in the factory setting is set.

12. Upgrading the software

1. Turn on the AC power.
2. Insert the upgrading USB flash memory for upgrade into the service slot.
 (After a while, an external input changes into USB automatically.)
3. Use the Menu button and cursor keys (◄/►/▲/▼), Ch keys (﹀/﹀) of R/C or on the set to select Menu - Setup - Information - Software update - USB update on OSD menu.
4. The message (Insert the USB memory device contains the software update file) shows up.
 Push OK when if there is no problem.



CHAPTER 6. TROUBLESHOOTING TABLE

[1] TROUBLESHOOTING TABLE

The sound is not emitted from the Speaker & Woofer though the picture has come out.

↓

No sound output in all modes?

↓ YES

Do audio signals output from pins [Y30/CPU_AOLRCK, Y31/CPU_AOBCK, V27/CPU_AOSDATA0] of IC3303 (Digital AV decode & Main CPU)? — NO → Check IC3303 and its peripheral circuits.

↓ YES

Do audio signals input to pins [7, 8, 9] of IC2701 (DSP)? — NO → Check the line between IC3303 and IC2701.

↓ YES

Do audio signals output from pins [43/AMP_BCLK, 44/AMP_LRCLK, 45/AMP_DATA_LR, 46/AMP_DATA_SW, 47/AMP_MCLK] of IC2701? — NO → Check IC2701 and its peripheral circuits.

↓ (A)

Do audio signals input to pins [5, 6, 7, 8] of IC2703 (SP_AMP)? — NO → Check the line between IC2701 and IC2703.

↓ YES

Do audio signals output from pins [28/OUTML, 30/OUTPL, 12/OUTPR, 14/OUTMR] of IC2703? — NO → Check IC2703 and its peripheral circuits.

↓ YES

Is AMP_MUTE [pin (21)] of IC2703 at “H”? — NO → Check the line between IC2703 and IC3303 & IC2001 (UCOM). (Q2701,D2701 etc...)

↓ YES

Do audio signals input to pins [1&2/L-ch, 3&4/R-ch] of P2701? — NO → P2701 terminal and the peripheral circuit (L/C filter) are checked.

↓ YES

Check Speaker (right and left) and wire harness.

No sound (during the reception of TV (ANALOG) broadcasting)

↓

Does not the sound go out though the picture has come out when UHF/VHF is received?

↓

In the case of LE635E/636E series, refer to (A).
In the case of LE638E series, refer to (B).

↓ (A)

Does SIF signal output from pin (8) of TUNER (TU1102)? — NO → Check the tuner and its peripheral circuits. Replace as required.

↓ YES

Does SIF signal input to pin [AM24/CPU_ATV_IF+] of IC3303 (Digital AV decode & Main CPU)? — NO → Check the line between TU1102 and IC3303. (Q1102, etc.)

↓ YES

Refer to “The sound is not emitted from the Speaker & Woofer though the picture has come out.”

↓ (B)

Does SIF signal output from pin (8) of TUNER (TU1104)? — NO → Check the tuner and its peripheral circuits. Replace as required.

↓ YES

Does SIF signal input to pin [AM24/CPU_ATV_IF+] of IC3303 (Digital AV decode & Main CPU)? — NO → Check the line between TU1104 and IC3303. (Q1102, etc.)

↓ YES

Refer to “The sound is not emitted from the Speaker & Woofer though the picture has come out.”

No sound (during the reception of TV (DIGITAL) broadcasting)

↓

Does not the sound go out though the picture has come out when DTV is received?

↓

In the case of LE635E/636E series, refer to (A).
In the case of LE638E series, refer to (B).

↓ (A)

Do IF signals output to pins [10, 11] of TUNER (TU1102)? — NO → Check the tuner and its peripheral circuits. Replace as required.

↓ YES

Do IF signals input to pins [35/IFPGA_INN, 36/IFPGA_INP] of IC4402 (CI Cont & DTB-T/C Demod)? — NO → Check the line between IC1102 and IC4402.

↓ YES

Do TS signals output to pins [15/DEMOD_TS_DATA0, 16/DEMOD_TS_SYNC, 17/DEMOD_TS_VAL, 18/DEMOD_TS_CLK] of IC4402? — NO → Check IC4402 and its peripheral circuits.

↓ YES

Do TS signals input to pins [U30/DEMOD_TSDATA0, V30/DEMOD_TSSYNC, V29/DEMOD_TSVAL, U32/DEMOD_TSCLK] of IC3303 (Digital AV decode & Main CPU)? — NO → Check the line between IC4402 and IC3303.

↓ YES

Refer to “The sound is not emitted from the Speaker & Woofer though the picture has come out.”

↓ (B)

Do TS signals output to pins [19/TS_TUOUT_CLK, 17/TS_TUOUT_SYNC, 18/TS_TUOUT_VAL, 20~27/TS_TUOUT_D0~7] of TUNER (TU1104)? — NO → Check the tuner and its peripheral circuits. Replace as required.

↓ YES

Do TS signals input to pins [45/TS_TUOUT_CLK, 46/TS_TUOUT_SYNC, 47/TS_TUOUT_VAL, 48, 51~57/TS_TUOUT_D0~7] of IC4402 (CI Cont & DTB-T/C Demod)? — NO → Check the line between TU1104 and IC4402.

↓ YES

Do TS signals output to pins [15/DEMOD_TS_DATA0, 16/DEMOD_TS_SYNC, 17/DEMOD_TS_VAL, 18/DEMOD_TS_CLK] of IC4402? — NO → Check IC4402 and its peripheral circuits.

↓ YES

Do TS signals input to pins [U30/DEMOD_TSDATA0, V30/DEMOD_TSSYNC, V29/DEMOD_TSVAL, U32/DEMOD_TSCLK] of IC3303 (Digital AV decode & Main CPU)? — NO → Check the line between IC4402 and IC3303.

↓ YES

Refer to “The sound is not emitted from the Speaker & Woofer though the picture has come out.”

No sound (during the reception of TV (DIGITAL-Satellite) broadcasting)
(DIGITAL-Satellite is only function for LE635E/636E series)

↓

Does not the sound go out though the picture has come out when DTV is received?

↓

Do TS signals output to pins [44/TS_TUOUT_CLK, 46/TS_TUOUT_SYNC, 45/TS_TUOUT_VAL, 43~36/TS_TUOUT_D0~7] of TUNER(TU1102)?

NO → Check the tuner and its peripheral circuits. Replace as required.

↓ YES

Do TS signals input to pins [45/S2_TS_CLK, 46/S2_TS_SYNC, 47/S2_TS_VAL, 48,51~57/S2_TS_DATA0~7] of IC4402 (CI Cont & DTB-T/C Demod)?

NO → Check the line between TU1102 and IC4402.

↓ YES

Do TS signals output to pins [15/DEMOD_TS_DATA0, 16/DEMOD_TS_SYNC, 17/DEMOD_TS_VAL, 18/DEMOD_TS_CLK] of IC4402?

NO → Check IC4402 and its peripheral circuits.

↓ YES

Do TS signals input to pins [U30/DEMOD_TSDATA0, V30/DEMOD_TSSYNC, V29/DEMOD_TSVAL, U32/DEMOD_TSCLK] of IC3303 (Digital AV decode & Main CPU)?

NO → Check the line between IC4402 and IC3303.

↓ YES

Refer to “The sound is not emitted from the Speaker & Woofer though the picture has come out.”

No sound from external input devices (1)

↓

Does not the sound of the audio signal input to EXT1 go out?

↓

Do audio signals input to pins [2/AUDIO_IN_R, 6/AUDIO_IN_L] of EXT1 (SC505)?

NO → Check the setting of an external input device that connects with EXT1.

↓ YES

Do audio signals input to pins [AM32/SC1_AINR0, AM30/SC1_AINL0] of IC3303 (Digital AV decode & Main CPU) from SC505?

NO → Check the line between SC505 and IC3303.

↓ YES

Refer to “The sound is not emitted from the Speaker & Woofer though the picture has come out.”

No picture on the display (1)

↓

The picture doesn't appear in all modes.

↓

Is the LVDS signal output from IC3303 (DIGITAL_AV_DECODER_&_MAIN_CPU) respectively?
[VBO_HTPDN(C21), VBO_LOCKN(D21), VBO_TXA+-(A22/B22), VBO_TXB+-(A23/B23), VBO_TXC+-(A24/B24), VBO_TXD+-(A25/B25)

↓ NO

Check IC3303 and its peripheral control circuits.
(IC2001, IC3501, IC3502, X3301, etc.)

↓ YES

Do above-mentioned LVDS signals output from connector (P2604)? — NO → Check the line between IC3303 and P2604.

↓ YES

Similarly, is LCD controller's control signal normal? — NO → Please check each control signal of DET_POW (DET_PNL12V), PE (PNL_EN).

↓ YES

LCD Controller Unit:
Do LVDS signals input to connector (LW) of LCD Controller Unit? — NO → Wire harness (LW) is checked.

↓ YES

Check the panel module.

No picture on the display (2)

↓

Does not the picture come out when VHF/UHF is received?

↓

In the case of LE635E/636E series, refer to (A).
In the case of LE638E series, refer to (B).

↓ (A)

Does video signal (IFTU_AIF+/CVBS) output from pin [9] of TUNER (TU1102)? — NO → Check the tuner and its peripheral circuits. Replace as required.

↓ YES

Does video signal (TUNER_CVBS) input to pin [AK24/ CPU_CVBS0P] of IC3303 (Digital AV decode & Main CPU)? — NO → Check the line between TU1102 and IC3303. (Q1106, etc...)

↓ YES

Refer to “No picture on the display (1)”.

↓ (B)

Does video signal (IFTU_AIF+/CVBS) output from pin [9] of TUNER (TU1104)? — NO → Check the tuner and its peripheral circuits. Replace as required.

↓ YES

Does video signal (TUNER_CVBS) input to pin [AK24/ CPU_CVBS0P] of IC3303 (Digital AV decode & Main CPU)? — NO → Check the line between TU1104 and IC3303. (Q1106, etc...)

↓ YES

Refer to “No picture on the display (1)”.

<During external connection> No picture on the monitor

↓

No picture appears on EXT1 connected monitor during the ATV reception.

↓

Does CVBS signal output from pin [19] of EXT1 (SC505)? — YES → Check the setting of an external input device that connects with EXT1.

↓ NO

Does CVBS signal output from pin [5] of IC510? (CAPLESS VIDEO AMP with LPF) — YES → Check the line between SC505 and IC510.

↓ NO

Does CVBS signal input to pin [3] of IC510? — YES → Check the peripheral circuits of IC510.

↓ NO

Does CVBS signal output from pin [2] of IC507? — YES → Check the line between IC507 and IC510.

↓ NO

Is CVBS_OUT_MUTE [pin (1)] of IC507 at “L”? — YES → Check the line between IC3303 and IC507. Check the peripheral circuits of IC3303.

↓ NO

Does CVBS signal input to pin [6] of IC507? — YES → Check the peripheral circuits of IC507.

↓ NO

In the case of LE635E/636E series, refer to (A)?
In the case of LE638E series, refer to (B)?

↓ (A)

Check the line between IC507 and TUNER (TU1102). (Q1106 etc...)

↓ (B)

Check the line between IC507 and TUNER (TU1104). (Q1106 etc...)

[2] LED flashing specification at the time of the error

Display method

- Refer to Table 1.
- LED that can be used are only one of the central icon (Emblem Unit).

 This expresses the error situation by combining blinking at low speed and blinking at high speed.
- For this model, the blinking pattern displayed first is only a low-speed blinking.

 This expresses **a rough content of the error.**
- For this model, details are displayed by a high-speed blinking by pushing remote control MENU key.

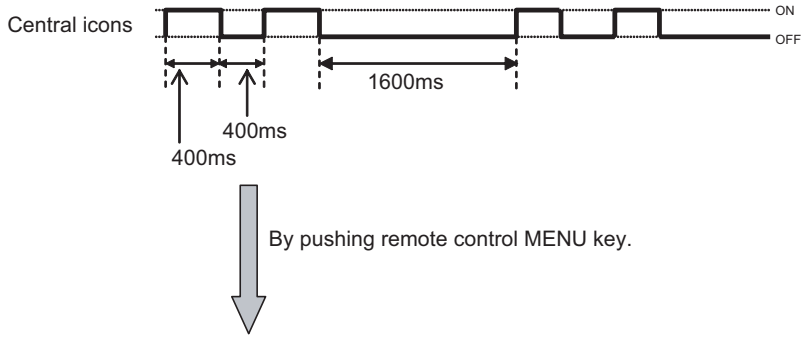
 This expresses **details of the error.**

 Details are distinguished by the blinking frequency.
- It doesn't return to the outline display again (blink at low speed) by pushing the MENU key (The toggle is not done).

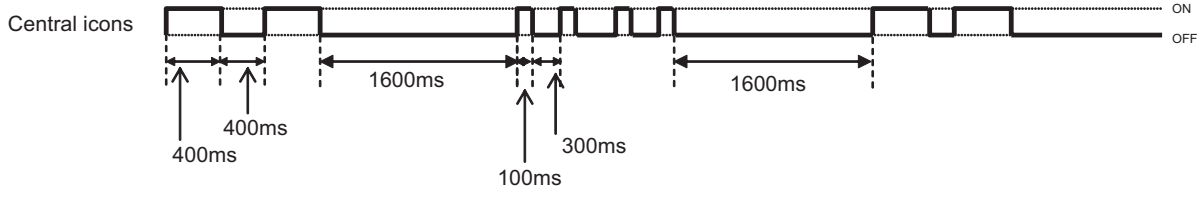
 Please confirm "MONITOR ERR CAUSE" of the adjustment Process mode (1/20 page), when the error doesn't reproduce by having returned from the error.
- The process of the upgrade is expressed by the brightness of point LED that smoothness changes.
- The upgrade completion is expressed by the LED brightness that changes in a staircase pattern.

LED flashing method

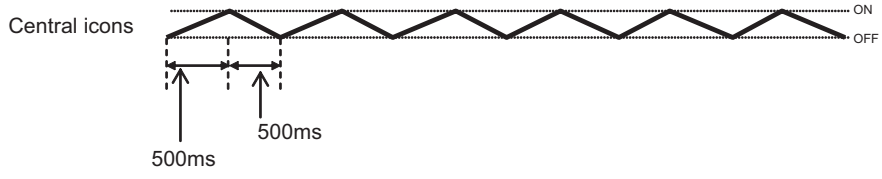
<Examination for a rough content of the error>



<Examination for details of the error>



<Upgrade executing>



<Upgrade completion>

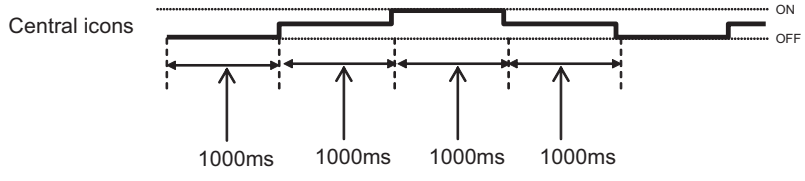


Table 1. Concrete flashing pattern

Item	Expression for a rough content		Expression for Details		Cause
	low-speed blinking	high-speed blinking	low-speed blinking	high-speed blinking	
Lamp system failure	Flashes once	—	Flashes once	Flashes once	Lamp error
Power PWB failure (Power failure, etc.)	Flashes twice	—	Flashes twice	Flashes once	Power Error 1 AC_DET error (*2)
				Flashes twice	Power Error 2 UR+13.5V error (*2)
				Flashes 3 times	Power Error 3 D3.3V error (*2)
				Flashes 5 times	Panel power supply error
Main PWB failure (Communication failure, etc.)	Flashes 3 times	—	Flashes 3 times	Flashes once	Initial communication error
				Flashes twice	Start-up confirmation communication error
				Flashes 3 times	Regular communication error
				Flashes 5 times	Other communication error
Others	Flashes 4 times	—	Flashes 4 times	Flashes once	Temperature error
				Flashes twice	Sync error
				Flashes 3 times	Notification from the main microprocessor (*3)
Upgrade executing	smoothness changes.	—	—	—	Version upgrading
Upgrade completion	a staircase pattern.	—	—	—	Version upgrade succeeded
Upgrade failed	—	Flashing (Continuous)	—	—	Version upgrade failed
ROM data failure	—	Flashing (Continuous)	—	—	Start-up after failing version upgrade (*4)

*2: It depends on the system. The power supply error suitable for the product is defined.

*3: For details, refer to ERROR STANDBY CAUSE on the adjustment process screen.

*4: If the boot section is abnormal, there is no flashing (flashing disabled).

MONITOR ERR STBY table

Outline: Communication/Power failure detected by the monitor microprocessor (IC2001) is stored on EEPROM, states can be confirmed in the adjustment process mode.

Location: Page (1/20) of the adjustment process mode: MONITOR ERR CAUSE “0” if there is no error. It is cleared to 0 on the page (2/20) of the adjustment process mode.

Display	Error description	
02	Start-up communication error 2	Initial communication from the main CPU is not received.
03	Start-up communication error 3	Only the initial communication is received.
04	Start-up communication error 4	Until panel information request reception
05	Start-up communication error 5	Until initialization completion reception
06	Start-up communication error 6	Until version notification transmission
07	Start-up communication error 7	Until start-up information notification transmission
08	Start-up communication error 8	Until start-up information response reception
09	Start-up communication error 9	Until time-out setting reception
0A	Communication error A	REQ time-out
0B	Communication error B	Restart time-out during the beginning of time acquisition start-up
0C	Communication error C	Ending sequence time-out
0D	Communication error D	Preset start-up time-out during completion
0E	Communication error E	Download start-up time-out
0F	Communication error F	Time acquisition time-out
11	Communication error H	Regular communication time-out
16	Panel-related error	Lamp failure
1A	Other error 2	Monitor temperature failure
1D	Power supply error 1	PS_ON (AC_DET) failure
1E	Power supply error 2	D_POW (DET_13V) failure
1F	Power supply error 3	D_POW (DET_D3V3) failure
21	Power supply error 5	Panel power failure
23	Other error 3	Error standby request from the main CPU

LED flashing timing chart at the time of the error



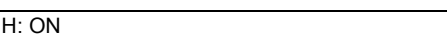
1) Low-speed blinking

Error type	Expression of Central Icon LED	
Lamp failure low-speed blinking Flashes once	H: ON  L: OFF	Refer to “Lamp failure details”. LOW/High blinking by pressing the [MENU] key on the remote control.
Power failure low-speed blinking Flashes twice	H: ON  L: OFF	Refer to “Power failure details”. LOW/High blinking by pressing the [MENU] key on the remote control.
Communication failure with main CPU low-speed blinking Flashes 3 times	H: ON  L: OFF	Refer to “Communication failure details”. LOW/High blinking by pressing the [MENU] key on the remote control. Communication line failure or main CPU communication failure.
Others low-speed blinking Flashes 4 times	H: ON  L: OFF	Refer to “Other failure details”. LOW/High blinking by pressing the [MENU] key on the remote control.

2) Lamp failure details (Low-speed blinking: Flashes once + High-speed blinking)

Error type	Expression of Central Icon LED	Note: Pins are monitor microprocessor pins unless otherwise specified (IC2001).
Lamp failure Flashes once (High speed)	H: ON  L: OFF	LAMP_ERR (19pin): Abnormal H. Confirmed after 8 consecutive detections at 64ms intervals (detected only when the backlight is on). NOTE: After 5 detection counts, the lamp cannot be activated except in the monitoring process. To confirm the problem, “Lamp Error detection off-mode” is prepared. This mode compulsorily starts the set disregarding the count. Please refer to [9. Lamp Error detection (ADJUSTMENT PROCEDURE)]

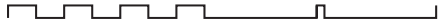
3) Power failure details (Low-speed blinking: Flashes twice + High-speed blinking)

Error type	Expression of Central Icon LED	Note: Pins are monitor microprocessor pins unless otherwise specified (IC2001).
PS_ON AC_DET failure Flashes once (High speed)	H: ON  L: OFF	AC_DET (28pin): Abnormal (L). If error is detected during start-up or operation, the power is turned on again by interrupt handling (instantaneous blackout processing).
SM_POW Main 13V failure Flashes twice (High speed)	H: ON  L: OFF	DET_13V (32pin): Abnormal (L). Main 13V is not applied. If error is detected during start-up or operation, the power is turned on again by polling.
D_POW Digital 3.3V failure Flashes 3 times (High speed)	H: ON  L: OFF	DET_D3V3 (33pin): abnormal (L). Digital 3.3V is not applied. If error is detected during start-up or operation, the power is turned on again by polling.
PANEL_POW Panel 12V failure Flashes 5 times (High speed)	H: ON  L: OFF	DET_PNL12V (34pin): abnormal (L). DET_PNL12V is not applied. Detection starts after receiving command from Panel Power ON. The power is turned off by polling.

4) Communication failure details (Low-speed blinking: Flashes 3 times + High-speed blinking)

Error type	Expression of Central Icon LED	Note: Basically, debug print logs are analyzed or communication logs are analyzed by a bus monitor.
Initial communication reception failure Flashes once (High speed)	H: ON  L: OFF	Initial communication from the main CPU is not received. (Request for the monitor model No. is not received.) → Communication line failure or main CPU start-up failure.
Start-up confirmation reception failure Flashes twice (High speed)	H: ON  L: OFF	Start-up reason confirmation from the main CPU cannot be received. (Startup communication until start-up reason notification command is not received.) → Main CPU start-up failure or monitor microprocessor reception failure.
Regular communication failure Flashes 3 times (High speed)	H: ON  L: OFF	Regular communication that is performed at 1 second intervals in the normal operation is interrupted. → Main CPU operation failure or monitor microprocessor reception failure.
Other communication failure Flashes 5 times (High speed)	H: ON  L: OFF	When a request (PM_REQ=H) is sent from the main microprocessor, the request command is not output from the main CPU, etc. → Main CPU operation failure or monitor microprocessor reception failure.

5) Other failure details (Low-speed blinking: Flashes 4 times + High-speed blinking)

Error type	Expression of Central Icon LED	Note: Pins are monitor microprocessor pins unless otherwise specified (IC2001).
Monitor temperature failure Flashes once (High speed)	H: ON  L: OFF	If the panel temperature is 60°C or more for 15s or more in a row, CAUTION appears on the OSD (flashes in red in the lower right screen). If the panel temperature is 60°C or more for 25s or more in a row, error standby is activated. (MONITOR MAX TEMP on page (12/20) of the adjustment process: Change AD value for temperature failure): Thermistor
Main failure Flashes 3 times (High speed)	H: ON  L: OFF	Main microprocessor detection error (CPU temperature error, etc.) Details are displayed on page (1/20) of the adjustment process for the main microprocessor.

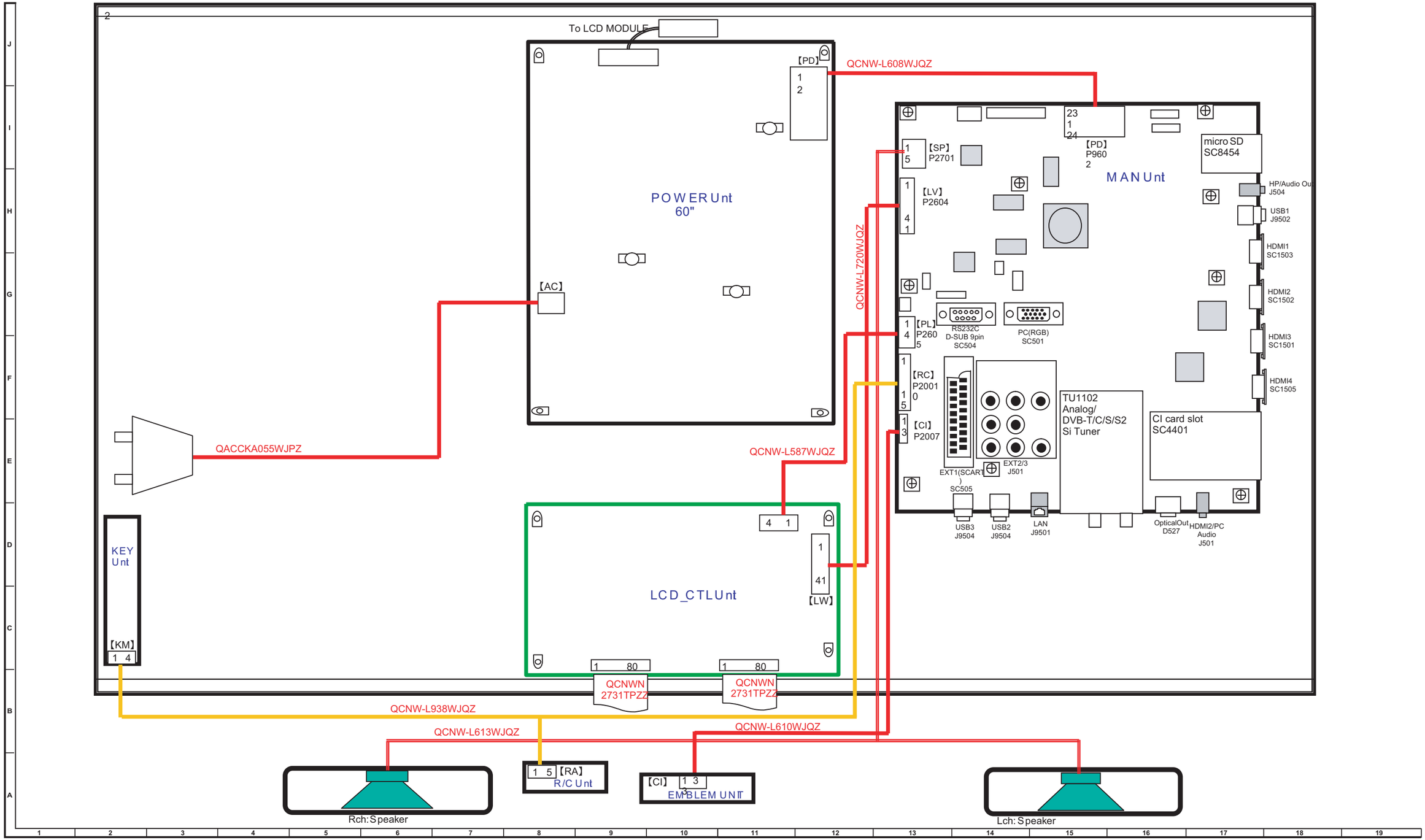
CHAPTER 7. MAJOR IC INFORMATIONS

[1] MAJOR IC INFORMATIONS

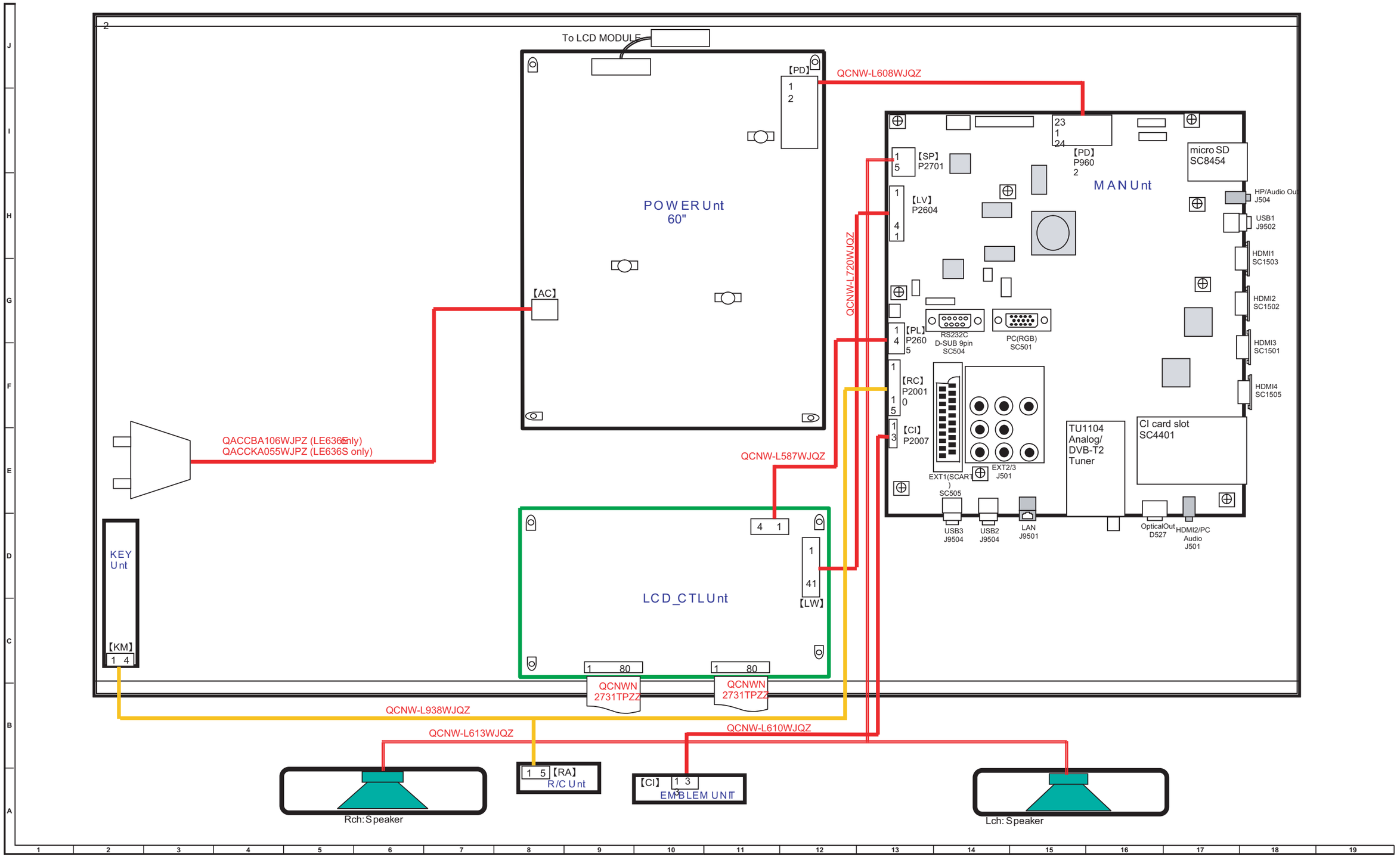
REF NO	Name	Part Code	Description
[MAIN UNIT]			
IC8401	RH-iXD287WJQZQ	Flash	This IC is 2048Mbit NAND flash memory. This IC stores the software data that processes the system of TV such as the graphic processing, the LCD controls, and backlights etc.
IC3303	RH-iXD220WJQZQ	Digital AV decode Main CPU	This IC is Video Processor & MAIN CPU. In this IC, the decode processing and the video signal processing are done. Moreover, OSD is generated here and added to a picture signal.
IC2001	RH-iXD241WJQZQ for service (RH-iXD241WJNJQ)	UCOM	The monitor microprocessor is intended to communicate with the main CPU and to operate the system. It also controls power of the entire system.
IC3501/3502	RH-iXD242WJQZQ	DDR	This IC is 2GB DDR3 SDRAM. This IC operates as a memory of IC3303 (Digital AV decode & Main CPU).
IC3503	RH-IXD266WJQZQ	DDR	Tshis IC is 1GB DDR3 SDRAM . This IC operates as a memory of IC3303 (Digital AV decode & Main CPU).
IC8455	VHiR24064AS-1Y	64K bit E2PROM	The BR24S64W is a 64Kbit-2-wire (I2C bus type) serial EEPROM that can be programmed electrically. This IC stores the menu data and the adjustment value data of adjustment process mode etc. The data is given out by commands from the main microprocessor.
IC506	VHiM3221EiP-1Y	RS232C-DRIVER	The MAX3221E is a single driver, single receiver RS-232 solution operating from a single Vcc supply. The RS-232 pins provide IEC G1000-4-2 ESD Protection. The device meets the requirements of TIA/EIA-232-F and provides the electrical interface between an asynchronous communication controller and the serial-port connector. The charge pump and four small external capacitors allow operation from a single 3V to 5.5V supply.
IC4402	VHiMT5135AE-1Q	CI controller DTB-T/C Demodulator	This is a control IC for PCMCIA cards. This controls information on IC cards inserted into the PCMCIA card slot (SC4401) or information on software version upgrade cards saved on flash memories to transfer the data to CPUs and memories.
IC2005	VHiR24002AS-1Y	2K bit E2PROM	This is a 2Kbit-2-wire (I2C bus type) serial EEPROM that can be programmed electrically. This IC stores the menu data and the adjustment value data of adjustment process mode etc. The data is given out by commands from the main microprocessor.
IC1504	VHiSii9387+-1Q	HDMI_Port_Processor	The SiI9387 HDMI port processor is the second generation of HDMI devices that support revision 1.4 of the HDMI specification. The main feature is as follows. 1) 5-input, 1-output HDMI port processor. 2) Audio Return Channel that allows an S/PDIF uplink from HDMI sink device to an HDMI source available in one reciver port. 3) Integrated TMDS receiver and transmitter cores capable of receiving and transmitting at 2.25Gbps. 4) Supports video resolutions up to 1080p, 60Hz, 12bit or 720p/1080i, 120Hz,12bit. 5) Receiver fully comply with DVI1.0, HDCP and several optional 3D formats described in the HDMI1.4 specifications.
IC9505	VHiPD720114-1Q	Ethernet Bus Interface	The IC is a USB 2.0 hub device that complies with the Universal Serial Bus (USB) Specification Revision 2.0 and works up to 480 Mbps. USB 2.0 compliant transceivers are integrated for upstream and all downstream ports. The IC4 works backward compatible either when any one of the downstream ports is connected to a USB 1.1 compliant device, or when the upstream port is connected to a USB 1.1 compliant host.
IC2703	VHiYDA164BZ-1Y	Audio-AMP	This IC is digital audio power amplifier with digital audio interface. The power-supply voltage is corresponded to A.5V~18V and the maximum output is 20Wx2ch.
IC1105 (LC-60LE835E, 638E only)	RH-iXC563WJQZY	LNB supply and control	It is IC for amplifying the feeble electric wave sent from satellite broadcasting on the level which can treat a decoder, and changing and processing signal.

CHAPTER 8. OVERALL WIRING/SYSTEM BLOCK DIAGRAM

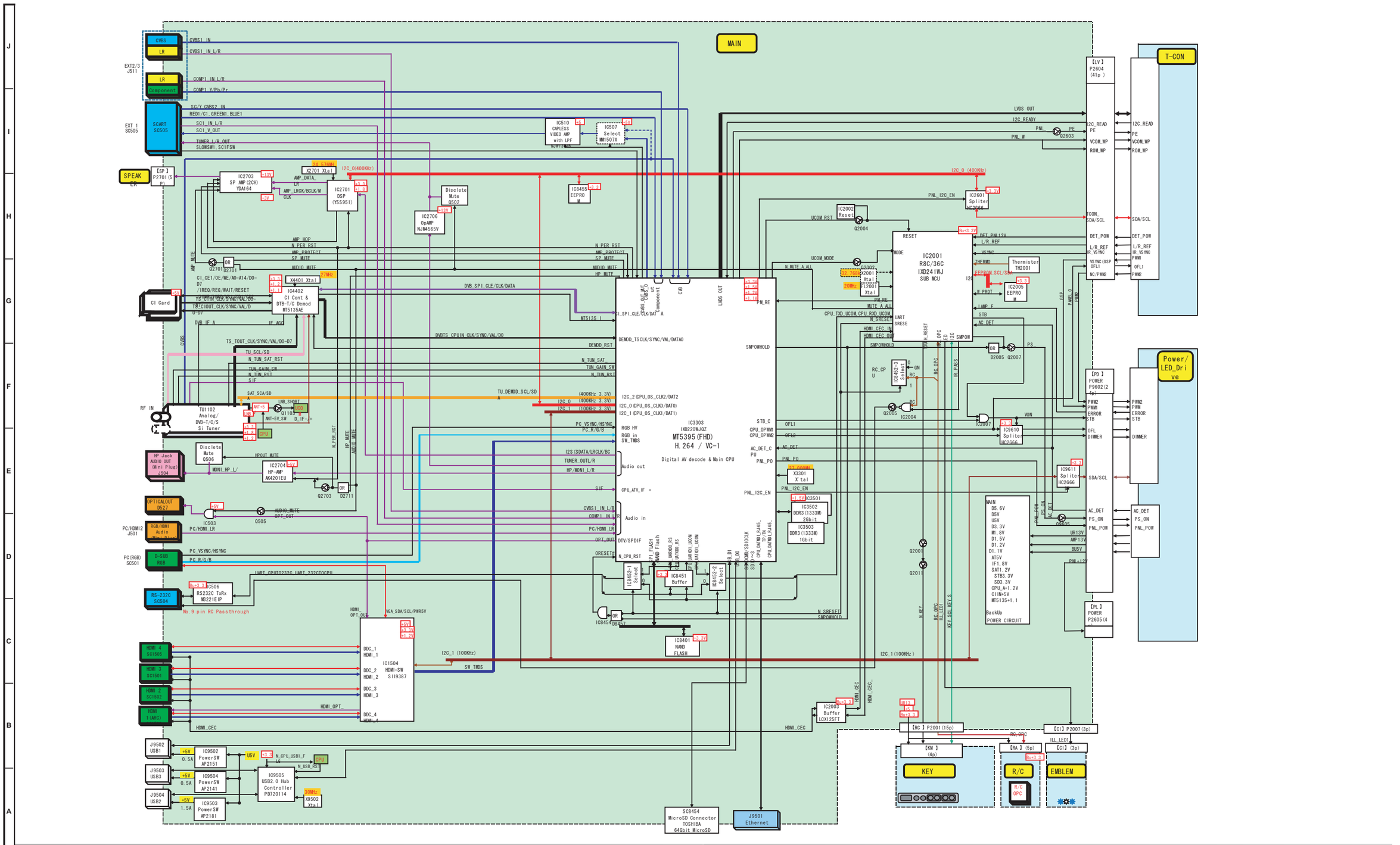
[1] OVERALL WIRING DIAGRAM (LC-60LE635E/638E)



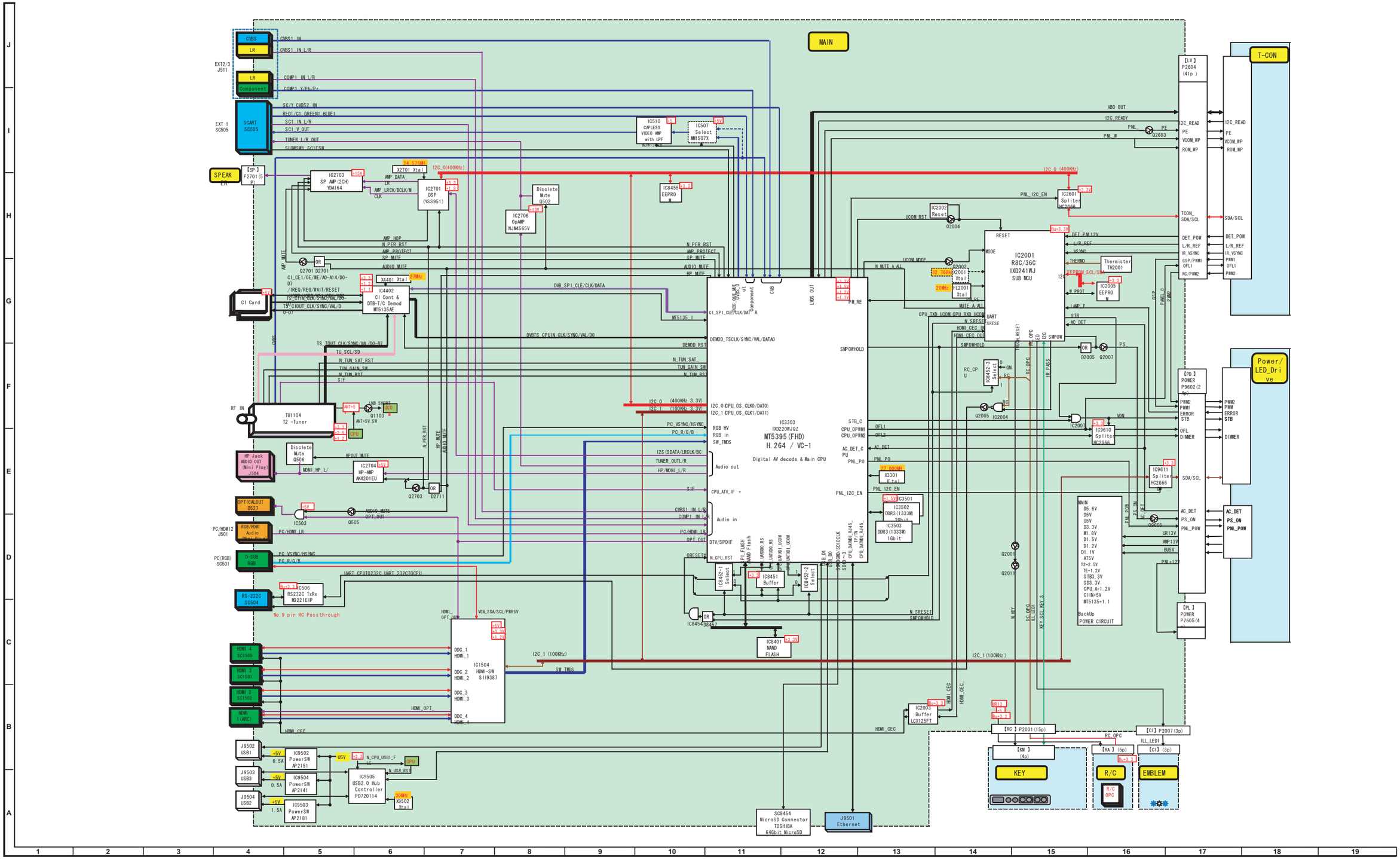
[2] OVERALL WIRING DIAGRAM (LC-60LE636E)



[3] SYSTEM BLOCK DIAGRAM (LC-60LE635E/638E)



[4] SYSTEM BLOCK DIAGRAM (LC-60LE636E)



SHARP PARTS GUIDE

No. S91T960LE635E



LCD COLOR TELEVISION

MODELS LC-60LE635E
LC-60LE636E
LC-60LE638E

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[7] SERVICE JIGS (USE FOR SERVICING)

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

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The contents are subject to change without notice.

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[1] PRINTED WIRING BOARD ASSEMBLIES					
N	DUNTKF733FM55		N	P	MAIN Unit(LC-60LE635E)
N	DUNTKF733FM56		N	P	MAIN Unit(LC-60LE636E)
N	DUNTKF733FM57		N	P	MAIN Unit(LC-60LE638E)
N	DUNTKF494FM02			P	R/C OPC Unit
N	DUNTKF770FM53		N	P	ICON Unit
N	DUNTKF800FM52		N	P	KEY Unit
N	RUNTK4910TPZT		N	P	LCD Control Unit
⚠1 N	RUNTKA847WJN1		N	P	Power Unit
[2] LCD PANEL MODULE UNIT					
N	R1LK600D3GW7CH		N	P	60" LCD PANEL (LK600D3GW7CH)
[3] DUNTKF733FM55/56/57 (MAIN Unit)					
C1101	VCKYCZ1EB822KY	AA		J	Capacitor 8200p 25V Ceramic (excepe LC-60LE636E)
C1102	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic (excepe LC-60LE636E)
C1104	RC-KZA621WJQZY	AA		J	Capacitor (excepe LC-60LE636E)
C1106	VCCCCZ1HH330JY	AB		J	Capacitor 33p 50V Ceramic (excepe LC-60LE636E)
C1107	VCEASH1EN686MY	AD		J	Capacitor 68 25V Electrolytic (excepe LC-60LE636
C1108	VCCCCZ1HH330JY	AB		J	Capacitor 33p 50V Ceramic (excepe LC-60LE636E)
C1111	VCEASH1EN686MY	AD		J	Capacitor 68 25V Electrolytic (excepe LC-60LE636
C1112	RC-KZA237WJZZY	AB		J	Capacitor (excepe LC-60LE636E)
C1113	RC-KZA709WJQZY	AA		J	Capacitor (excepe LC-60LE636E)
C1114	RC-KZA621WJQZY	AA		J	Capacitor (excepe LC-60LE636E)
C1115	RC-KZA383WJZZY	AC		J	Capacitor (excepe LC-60LE636E)
C1116	RC-KZA709WJQZY	AA		J	Capacitor (excepe LC-60LE636E)
C1117	RC-KZA709WJQZY	AA		J	Capacitor (excepe LC-60LE636E)
C1118	RC-KZA237WJZZY	AB		J	Capacitor (for LC-60LE636E)
C1119	RC-KZA383WJZZY	AC		J	Capacitor (excepe LC-60LE636E)
C1120	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic (excepe LC-60LE636E)
C1123	VCKYCZ1AB473KY	AB		J	Capacitor 0.047 10V Ceramic (excepe LC-60LE636E)
C1125	VCKYCZ1AB473KY	AB		J	Capacitor 0.047 10V Ceramic (excepe LC-60LE636E)
C1130	RC-KZA237WJZZY	AB		J	Capacitor (excepe LC-60LE636E)
C1174	VCCCCZ1HH330JY	AB		J	Capacitor 33p 50V Ceramic (for LC-60LE636E)
C1175	VCCCCZ1HH330JY	AB		J	Capacitor 33p 50V Ceramic (for LC-60LE636E)
C1178	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic (excepe LC-60LE636E)
C1179	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic (for LC-60LE636E)
C1180	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic (for LC-60LE636E)
C1181	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic (excepe LC-60LE636E)
C1182	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic (excepe LC-60LE636E)
C1183	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic (excepe LC-60LE636E)
C1184	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic (excepe LC-60LE636E)
C1188	VCKYCZ1HB102KY	AB		J	Capacitor 1000p 50V Ceramic (excepe LC-60LE636E)
C1189	VCKYCY1EB104KY	AB		J	Capacitor 0.1 25V Ceramic (excepe LC-60LE636E)
C1190	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic (excepe LC-60LE636E)
C1191	RC-KZA531WJQZY	AA		J	Capacitor (for LC-60LE636E)
C1192	RC-KZA531WJQZY	AA		J	Capacitor (for LC-60LE636E)
C1193	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic (for LC-60LE636E)
C2002	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C2005	VCCCCZ1HH101JY	AB		J	Capacitor 100p 50V Ceramic
C2603	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C2604	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C2605	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C2606	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C2607	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C2608	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C2609	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C2610	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C3519	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C3520	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C3521	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C3522	RC-KZA237WJZZY	AB		J	Capacitor
C3523	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C3524	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C3525	RC-KZA237WJZZY	AB		J	Capacitor
C3526	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C3527	VCKYCZ1AB104KY	AB		J	Capacitor 0.1 10V Ceramic
C4461	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic (excepe LC-60LE636E)
C4462	VCKYCZ1EB103KY	AA		J	Capacitor 0.01 25V Ceramic (excepe LC-60LE636E)
D1101	VHDRB156L40-1Y	AC		J	Diode RB156L-40TE25 (excepe LC-60LE636E)
D1102	VHD1SR154++-1Y	AC		J	Diode 1SR154-400TE25 (excepe LC-60LE636E)
D1103	VHDRB156L40-1Y	AC		J	Diode RB156L-40TE25 (excepe LC-60LE636E)
D1104	VHDRB156L40-1Y	AC		J	Diode RB156L-40TE25 (excepe LC-60LE636E)
D1105	VHDRB156L40-1Y	AC		J	Diode RB156L-40TE25 (excepe LC-60LE636E)
FB1101	RBLN-A192WJZZY	AA		J	Ferrite Core (excepe LC-60LE636E)
FB1104	RBLN-A192WJZZY	AA		J	Ferrite Core (excepe LC-60LE636E)
FB2023	RBLN-A192WJZZY	AA		J	Ferrite Core
FB2024	RBLN-A192WJZZY	AA		J	Ferrite Core
FB2601	RBLN-A042WJZZY	AB		J	Ferrite Core
FB2602	RBLN-A042WJZZY	AB		J	Ferrite Core
FB2603	RBLN-A042WJZZY	AB		J	Ferrite Core
FB2604	RBLN-A074WJZZY	AA		J	Ferrite Core
FB2605	RBLN-A042WJZZY	AB		J	Ferrite Core
FB2606	RBLN-A074WJZZY	AA		J	Ferrite Core
FB2607	RBLN-A074WJZZY	AA		J	Ferrite Core
FB2608	RBLN-A042WJZZY	AB		J	Ferrite Core

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKF733FM55/56/57 (MAIN Unit)					
FB2609	RBLN-A042WJZZY	AB		J	Ferrite Core
FB2610	RBLN-A074WJZZY	AA		J	Ferrite Core
FB2611	RBLN-A074WJZZY	AA		J	Ferrite Core
FB2612	RBLN-A074WJZZY	AA		J	Ferrite Core
FB2613	RBLN-A074WJZZY	AA		J	Ferrite Core
FB2614	RBLN-A042WJZZY	AB		J	Ferrite Core
FB2615	RBLN-A192WJZZY	AA		J	Ferrite Core
FB2616	RBLN-A192WJZZY	AA		J	Ferrite Core
FB3305	RBLN-A022WJZZY	AA		J	Ferrite Core
FL3507	RFiLNA119WJZZY	AC		J	Filter
FL3508	RFiLNA119WJZZY	AC		J	Filter
FL3509	RFiLNA119WJZZY	AC		J	Filter
IC1105	RH-iXC563WJQZY	AR		J	IC LNBH23PPR/1B (excepe LC-60LE636E)
IC1108	VHi3416C25N-1Y	AB		J	IC MM3416C25NRE (for LC-60LE636E)
IC2001	RH-iXD241WJNJQ			J	IC (Monitor Microcomputer)
IC3503	RH-iXD266WJQZQ	AW		J	IC K4B1G1646G-BCH9
L1101	RCiLPB016WJQZY	AC		J	Coil (excepe LC-60LE636E)
L1102	RCiLPB227WJQZY			P	Coil (excepe LC-60LE636E)
L1103	VPCEM100MR70NY	AC		J	Coil (excepe LC-60LE636E)
L1104	VPCEM100MR70NY	AC		J	Coil (excepe LC-60LE636E)
L1107	VPCEM100MR70NY	AC		J	Coil Peaking 10μH (excepe LC-60LE636E)
L1501	RCiLFA228WJZZY	AD		J	Coil (excepe LC-60LE636E)
L1502	RCiLFA228WJZZY	AD		J	Coil (excepe LC-60LE636E)
L1503	RCiLFA228WJZZY	AD		J	Coil (excepe LC-60LE636E)
L1504	RCiLFA228WJZZY	AD		J	Coil (excepe LC-60LE636E)
L1105	VPCEM100MR70NY	AC		J	Coil (for LC-60LE636E)
L1107	VPCEM100MR70NY	AC		J	Coil Peaking 10μH (for LC-60LE636E)
L1501	RCiLFA228WJZZY	AD		J	Coil (for LC-60LE636E)
L1502	RCiLFA228WJZZY	AD		J	Coil (for LC-60LE636E)
L1503	RCiLFA228WJZZY	AD		J	Coil (for LC-60LE636E)
L1504	RCiLFA228WJZZY	AD		J	Coil (for LC-60LE636E)
L2607	RCiLFA228WJZZY	AD		J	Coil
L2608	RCiLFA228WJZZY	AD		J	Coil
L2609	RCiLFA228WJZZY	AD		J	Coil
L2610	RCiLFA228WJZZY	AD		J	Coil
P2604	QCNCWA671WJQZY	AH		J	Plug
Q1108	VS2SC3928AR-1Y	AB		J	Transistor 2SC3928A-T112-1R (excepe LC-60LE636E)
R1102	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide (for LC-60LE636E)
R1103	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide (for LC-60LE636E)
R1105	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide (excepe LC-60LE6
R1108	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E
R1110	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide (excepe LC-60LE6
R1111	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide (excepe LC-60LE63
R1120	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide (excepe LC-60LE63
R1122	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide (excepe LC-60LE63
R1126	VRS-CZ1JF153JY	AA		J	Resistor 15k 1/16W Metal Oxide (excepe LC-60LE63
R1127	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E
R1128	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide (excepe LC-60LE63
R1129	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide (excepe LC-60LE63
R1131	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide (excepe LC-60LE63
R1132	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E
R1133	VRS-TQ2EF3R3JY	AA		J	Resistor 3.3 1/4W Metal Oxide (excepe LC-60LE636
R1134	VRS-CZ1JF150JY	AA		J	Resistor 15 1/16W Metal Oxide (excepe LC-60LE636
R1136	VRK-SB1FF220JY	AA		J	Resistor 22 1/32W Metal Composition (excepe LC-6
R1137	VRK-SB1FF220JY	AA		J	Resistor 22 1/32W Metal Composition (excepe LC-6
R1138	VRK-SB1FF220JY	AA		J	Resistor 22 1/32W Metal Composition (excepe LC-6
R1139	VRK-SB1FF220JY	AA		J	Resistor 22 1/32W Metal Composition (for LC-60LE
R1140	VRK-SB1FF220JY	AA		J	Resistor 22 1/32W Metal Composition (for LC-60LE
R1142	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition (excepe LC-6
R1143	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide (excepe LC-60LE63
R1144	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide (excepe LC-60LE63
R1145	VRK-SB1FF220JY	AA		J	Resistor 22 1/32W Metal Composition (for LC-60LE
R1151	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide (excepe LC-60LE63
R1154	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E
R1155	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E
R1157	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E
R1159	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide (excepe LC-60LE63
R1162	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E
R1164	VRS-CY1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (for LC-60LE636E)
R1180	VRS-CZ1JF154JY	AA		J	Resistor 150k 1/16W Metal Oxide (excepe LC-60LE6
R1181	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide (excepe LC-60LE6
R1182	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide (excepe LC-60LE6
R1183	VRS-CZ1JF223JY	AA		J	Resistor 22k 1/16W Metal Oxide (excepe LC-60LE63
R1184	VRS-CZ1JF103JY	AA		J	Resistor 10k 1/16W Metal Oxide (excepe LC-60LE63
R1185	VRK-SB1FF000JY	AA		J	Resistor 0 1/32W Metal Composition (excepe LC-60
R1186	VRK-SB1FF000JY	AA		J	Resistor 0 1/32W Metal Composition (excepe LC-60
R1187	VRK-SB1FF000JY	AA		J	Resistor 0 1/32W Metal Composition (excepe LC-60
R1188	VRK-SB1FF000JY	AA		J	Resistor 0 1/32W Metal Composition (for LC-60LE6
R1189	VRK-SB1FF000JY	AA		J	Resistor 0 1/32W Metal Composition (for LC-60LE6
R1190	VRK-SB1FF000JY	AA		J	Resistor 0 1/32W Metal Composition (for LC-60LE6
R1191	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E
R1195	VRS-CZ1JF104JY	AA		J	Resistor 100k 1/16W Metal Oxide (excepe LC-60LE6
R1201	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E
R1202	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E
R1203	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] DUNTKF733FM55/56/57 (MAIN Unit)					
R1204	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E
R1205	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E
R1206	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E
R1207	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide (excepe LC-60LE636E
R2027	VRS-CZ1JF272JY	AA		J	Resistor 2.7k 1/16W Metal Oxide
R2711	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2712	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2713	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2721	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2722	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2723	VRS-CZ1JF000JY	AA		J	Resistor 0 1/16W Metal Oxide
R2724	VRS-CZ1JF100JY	AA		J	Resistor 10 1/16W Metal Oxide
R3358	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R3422	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide (excepe LC-60LE6
R3423	VRS-CZ1JF222JY	AA		J	Resistor 2.2k 1/16W Metal Oxide (excepe LC-60LE6
R3533	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R3534	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R3535	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R3536	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R3537	VRK-SB1FF470JY	AA		J	Resistor 47 1/32W Metal Composition
R3538	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R3539	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R3540	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R3541	VRS-CZ1JF470JY	AA		J	Resistor 47 1/16W Metal Oxide
R3542	VRK-SA1JF000JY	AB		J	Resistor 0 1/16W Metal Composition
R3543	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R3544	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R3545	VRS-CZ1JF101JY	AA		J	Resistor 100 1/16W Metal Oxide
R3546	VRS-CZ1JF241FY	AB		J	Resistor 240 1/16W Metal Oxide
R3547	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R3548	VRS-CZ1JF102FY	AA		J	Resistor 1k 1/16W Metal Oxide
R4402	VRK-SB1FF473JY	AB		J	Resistor 47k 1/32W Metal Composition (for LC-60L
R4455	VRK-SA1JF000JY	AB		J	Resistor 0 1/16W Metal Composition (excepe LC-60
R4457	VRK-SA1JF000JY	AB		J	Resistor 0 1/16W Metal Composition (for LC-60LE6
R4459	VRK-SA1JF100JY	AB		J	Resistor 10 1/16W Metal Composition (excepe LC-6
TU1102	RTUDWA029WJQZ			P	Tuner (excepe LC-60LE636E)
TU1104	RTUDAA072WJQZ			P	Tuner (for LC-60LE636E)
[4] DUNTKF800FM52 (KEY Unit)					
D151	RH-EX1394CEZZY	AB	N	J	Diode UDZSFVTE-175.6B
D152	RH-EX1394CEZZY	AB	N	J	Diode UDZSFVTE-175.6B
D153	RH-EX1394CEZZY	AB	N	J	Diode UDZSFVTE-175.6B
P151	QPLGNA324WJZZY	AC		J	Plug
R151	VRS-CY1JF822JY	AA	N	J	Resistor 8.2k 1/16W Metal Oxide
R152	VRS-CY1JF123JY	AA	N	J	Resistor 12k 1/16W Metal Oxide
R153	VRS-CY1JF822JY	AA	N	J	Resistor 8.2k 1/16W Metal Oxide
R154	VRS-CY1JF123JY	AA	N	J	Resistor 12k 1/16W Metal Oxide
S151	QSW-KA037WJZZY	AC		J	Switch
S152	QSW-KA037WJZZY	AC		J	Switch
S153	QSW-KA037WJZZY	AC		J	Switch
S154	QSW-KA037WJZZY	AC		J	Switch
S155	QSW-KA037WJZZY	AC		J	Switch
S156	QSW-KA037WJZZY	AC		J	Switch
S157	QSW-KA037WJZZY	AC		J	Switch
[5] CABINET PARTS					
1	CCABAC821WJ21		N	P	Front Cabinet Ass'y
1-1	GCABAC821WJ2A		N	P	Front Cabinet
1-2	HDECQB671WJ2A		N	P	Front Decoration
1-3	PSHEZA312WJZZ			P	Protect Top
1-4	PSHEZA313WJZZ			P	Protect Side
1-5	PSHEZA321WJZZ			P	Protect Bottom
1-6	PSHEZA342WJZZ		N	P	Protect Edge
1-7	PSHEZA345WJZZ		N	P	Tape
2	GCABBC031WJ1A		N	P	Rear Cabinet Ass'y
3	GCOVAD966WJ1A			P	RC_OPC COV
4	GCOVAE203WJ2A		N	P	KEY Cover
5	HiNDPE032WJSB		N	P	P_INDICATOR/BTM (except U.K.)
6	HiNDPE035WJSA			P	P_INDICATOR/BCK
7	HiNDPE117WJSB		N	P	P_INDICATOR/SID
8	LANGKD148WJFW			P	Terminal Angle (Bottom) (except LC-60LE636E)
8	LANGKD192WJFW			P	Terminal Angle (Bottom) (for LC-60LE636E)
9	LHLDWA138WJKZ	AC		J	Wire Holder
10	JBTN-A936WJ2A		N	P	KEY BTN
11	LX-BZA207WJF7	AA		J	Screw
12	PSLDMB751WJFW			P	MAIN PWB Shield
13	LANGKD127WJFW	AD		J	Fixing Metal Angle
14	LANGKD265WJ2W		–	P	S-T-Angle
15	LANGKD281WJ2W		N	P	CENTER ANG
16	LHLDWA282WJKZ	AC		J	Wire Holder
17	QCNW-L587WJQZ	AE		J	Connecting Cord (PL)
18	QCNW-L608WJQZ	AM		J	Connecting Cord (PD)
19	LHLDWA294WJUZ	AC		J	Wire Holder
20	QCNW-L720WJQZ		N	P	Connecting Cord (LV)
21	QCNWN2731TPZZ	AF		J	Connecting Cord (80P:MDL-CTL)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[5] CABINET PARTS					
22	LX-BZA401WJN1	AC		J	Screw
23	LX-NZA049WJFN	AC		J	Screw (except LC-60LE636E)
24	NSFTZA459WJF7	AC	N	J	Tray Shaft
25	GCOVHA137WJSA	AB		J	Vesa Cover
26	GCOVAD981WJ2A	AH	N	J	AC Cord Cover
27	GCOVAE131WJ2A		N	P	Bottom Cover
28	TLABNC117WJZZ			P	Model Label
29	PMLT-A676WJZZ			P	Gasket (HDMI)
30	PSHEPB131WJKZ			P	ICON ILLUMI DIF
31	PSLDMB651WJZZ		-	P	Shield
32	LHLDWA303WJKA	AE		J	Cable Clamp
33	PSPAGA963WJZZ		-	P	PC Sheet
⚠ 34	QACCKA055WJPZ	AQ		J	AC Cord (except LC-60LE636K)
⚠ 34	QACCBA106WJPZ			P	AC Cord (for LC-60LE636K)
35	PSPAKA486WJKZ	AD		J	Spacer
36	QCNW-L610WJQZ	AL		J	Connecting Cord (CI)
37	QCNW-L613WJQZ	AH		J	Connecting Cord (SP)
38	PSPANA044WJKZ	AB	N	J	Spacer
39	QCNW-L938WJQZ		N	P	Connecting Cord (RC)
40	RSP-ZA538WJQZ		N	P	Speaker L
41	RSP-ZA539WJQZ		N	P	Speaker R
42	XBPS830P06WS0	AA		J	Screw
43	XEBS830P08000	AA		J	Screw
44	XEBS830P12000	AA		J	Screw
45	PSPAP0463TPZZ		N	P	-
46	PSPAZC554WJKZ	AD	N	J	25*25*3.0t_TCON
47	PSPAZC690WJZZ			P	Spacer
48	TLABZD035WJZZ		N	P	Energy Label (except Russia)
49	PSPAZC691WJZZ	AE		J	Spacer
50	PSPAZC702WJKZ	AQ		J	Spacer
51	PSPAZC777WJZZ		N	P	Spacer
52	PZETKA595WJKZ		N	P	AC Cord Barrier
53	PZETKA638WJKZ		-	P	FFC BAR SHT T
54	PZETKA639WJKZ		-	P	FFC BAR SHT B
55	QEARZ0057CEFW	AB		J	Spring(Tuner)
56	RCORFA020WJZZ	AN	-	J	Core
57	RCORFA061WJZZ	AG		J	Ferrite core
58	HiNDPE122WJSB		N	P	P_INDICATOR/BTM (for U.K.)
59	TLABZC453WJZZ			P	Panel Label
[6] SUPPLIED ACCESSORIES/PACKING PARTS					
X1	CANGKD276WJ05		N	P	Stand Support Ass'y
X2	CDAi-A778WJ22		N	P	Stand Base Ass'y
X3	CSAKKA011WJ03		N	P	Stand Screw Ass'y
X4	LHLDWA303WJKA			P	Cable Clamp
X5	RRMCGA903WJSA			P	Remote Control (LC-60LE635E/636E)
X5	RRMCGA984WJSA			P	Remote Control (LC-60LE638E)
X6	TCAUZA477WJZZ		N	P	Safety Sheet
X7	TCAUZA446WJZZ			P	Weee Sheet (except Russia)
X8	TiNS-F305WJZZ		N	P	Set Up Guide
X9	TCAUZA458WJN1			P	Wifi Sheet
X10	UBATAA011WJZZ			P	AAA size Battery
X11	Ki-OUA003WJQZ			P	USB Dongle
X12	UiMCUA006WJQZ2		N	P	USB Memory
X13	TGAN-A801WJN1			P	Guarantee Card (for U.K.)
X14	TGAN-A802WJN1			P	Guarantee/AQUOS (for U.K.)
X15	TCAUZA478WJZZ			P	Gost Sheet (for Russia.)
X16	TGAN-B651WJZZ			P	Guarantee Sheet (for Russia.)
X17	LHLDWA303WJKA			P	Cable Clamp
S1	SPAKCG502WJZZ	-	N	-	Packing Case (Main)
S2	SPAKCG379WJZZ	-		-	P-Case Bottom
S4	SPAKXD490WJZZ	-	N	-	Packing Add (Top)
S5	SPAKXD491WJZZ	-	N	-	Packing FOAM (Bottom)
S7	SPAKPB723WJ2Z	-		-	Stand Mat (Support)
S8	SPAKPB722WJ2Z	-		-	Miror Mat (Base)
S8	SSAKAA111WJZZ	-		-	Polyethylene Bag
S9	SPAKPB750WJZZ	-		-	SACK
S10	SSAKKA011WJ2Z	-		-	Polyethylene Bag
S11	TLABM5584BMZZ	-		-	Case Label
S12	TLABK0023TAZZ	-		-	Label For R/C (except LC-60LE636E)
S13	TLABZC826WJZZ			P	Bar Code Label
[7] SERVICE JIGS (USE FOR SERVICING)					
N	QCNW-C222WJQZ			J	Main Unit to LCD Control to LCD Panel, x2
N	QCNW-L795WJQZ			J	Main Unit to Power Unit (PD)
N	QCNW-L796WJQZ			J	Main Unit to ICON Unit (CI)
N	QCNW-K595WJQZ			J	Main Unit to Speaker (SP)
N	QCNW-G405WJQZ			J	Main Unit to LCD Control Unit (PL)
N	QCNW-F676WJQZ			J	Main Unit to LCD Control Unit (LW)

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